

THE MICHIGAN FARMER,

A WEEKLY JOURNAL OF AFFAIRS
Relating to the Farm, the Garden, and the Household.

NEW SERIES.

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The Michigan Farmer,

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The Farm.

Plowing—the Team for it.

The work of the season commences either with plowing or the hauling of manure. Both these operations are heavy work, and require not only that the team should be in good order, but also that they should be adapted to the work. In the operation of plowing, the quality of the team is of the first consideration, and upon that depends not only in a great degree the quality but also the quantity of the work. Every farmer knows that there is no work more steady in its effect, and in which there is such a dead pull all the time from end to end of the furrow, and in furrow after furrow, as in plowing. In the hauling of heavy loads there are always more or less breathing places, owing to the road having its ups and downs; but if we take a piece of land on which the plowman begins on the outside, and goes round it till he winds up in the centre, there are few stopping places for the horses, without a loss of time to the owner, and of the service of the team, his implements, and the man who handles both; and this loss occurs at a season too when it is of the utmost consequence that every hour should be husbanded.

In the first place then, a team to do plowing and the spring work, should be perfectly sound in wind and limb. Without this state of the body, there is always a giving out; the plowman has to stop in the middle of the furrow, as well as at both ends to let the team recover themselves, so that he may be sure of having their services for the whole day; and then when the day's work is done, instead of a large surface being thoroughly done, there is but two-thirds of a good day's work, only skimmed over. The plowman is always easing up the team, of course in this operation, nobody suspects him of having any regard for his own wear and tear!

Besides being sound, the team should also

possess size and weight. A plow-team should not be under fifteen hands and a half in height, and should, when in moderate condition, weigh not less than eleven or twelve hundred—we prefer the latter weight, and think if the range of height is full sixteen hands, that it should be considered a benefit rather than a defect. Plow horses should be short on the leg with a deep body, a broad chest, a broad loin, and a deep flank. We do not want to see a lank, gander-legged horse in the plow. Give us a plow horse with plenty of belly on him, with height enough to give him a fair stride in his walk. A plow horse should have all things be a good walker. The walking gait is not cultivated enough in the training of horses. A farm horse that can walk five miles an hour, is more valuable than one that can trot twenty in the same time. Only consider what a team that could walk even four miles an hour for ten hours per day, could do towards hurrying forward spring work.

Horses intended for the farm, besides being sound, and having size and height, should also possess spirit and animation, as well as steadiness of temper, and they should be brought to their work in good condition. Many persons allow their horses the range of the yard during the winter, and the full benefit of the straw stack, with a feed of hay night and morning, and when spring comes they imagine all they have to do is to hitch them up. But it is soon found they are without substance, and lack stamina. This is manifested by the horse falling off in flesh, and becoming weak, and if pushed to his work, he will probably become sick, and unfit to do anything. This arises from the horse not being in condition when he is put to his work. A horse not employed during winter, and consequently, not fed regularly, and which is intended to aid in putting in spring crops, should be taken up for some weeks before his work commences, and be fed and worked, by way of preparation.

It is useless to depend on colts for spring work; they may be occasionally used, and they will be benefitted thereby, but a three year old should not be required to do a full day's work. The strain is apt to be rather too much on his system, and if he is put to plowing, if he gets tired, it frequently causes the young animal to lag in his gait, and eventually to become spiritless and lazy. As one of three for half a day, a colt may be used with benefit to himself and his owner, but even then he should only be in the hands of a man who feels an interest in his growth and progress.

To sum up, the farm-team on which the work and subsistence of the rest of the stock depends, should be the best, soundest, heaviest, most active and most docile horses on the place, and no man should for a moment suppose that light, little scallaws will ever do more than be unprofitable, by wasting the season that is most precious to the husbandman.

In this State we need very much an infusion of size and weight into the stock that is used on the farm. We should have a few crosses from the Clydesdale or improved Suffolk stock, to give us weight, breadth and power, combined with action in our farm stock. Most of the horses used on the farm now, are either high and leggy, or too small to be of service in the work, and hence most of them are too light.

How to increase the supply of Milk.
At the Farmer's club of West Cornwall Connecticut, one of the members observed that no talking should be allowed while milking was going on. Another said that he discharged a man because he would talk and interrupt the milking in his dairy, and that in three days the increase of milk was equal in value to the man's wages!

Profits of Corn.
It is stated that of forty crops of corn offered for premiums in Massachusetts, the average profit after paying all expenses incident to cultivation was \$51 per acre. Thus will be seen the benefits not only of offering premiums for this crop, but also that when men contend for a premium of this kind, the crop itself repays them whether the award is in their favor or not.

GYPSUM.

ITS COMPOSITION AND EFFECT AS A MANURE.

As the railroads of this State are now affording great facilities for the carriage of this valuable manure, a few remarks on its composition, and effect upon crops may be acceptable to agriculturists. This useful mineral is found in large quantities in New Brunswick and Nova Scotia; and the supplies of it at Grand Rapids, in this State, are said to be inexhaustible. In Europe it is called Plaster of Paris, from its abounding in the quarries of Montmartre, near the French metropolis. Some varieties of gypsum contain carbonate of lime, in some cases as much as thirty per cent: the agriculturists should avoid these and purchase the purest sulphate. In its crystallized form it is sometimes called selenite. One hundred pounds of uncalcined gypsum consists of

Sulphuric acid.....	46 lbs.
Lime.....	38
Water.....	21
	100

Of course the composition varies in different samples. It dissolves without difficulty in water, some varieties requiring 333, and others 500 times their own weight of water to effect a solution. By burning it is reduced in weight, the water being driven off; it is then easily reduced to powder, which is perfectly white, and extremely valuable for stucco, cement, &c.

On soils which contain all the other ingredients necessary to supply the food of plants, except sulphate of lime, gypsum has a powerful effect, particularly when applied to clover or any of the leguminous crops. If a sufficient quantity of sulphate of lime exist in the soil, the application of gypsum becomes perfectly useless, and on this account, its real value as a manure has been improperly estimated by persons who did not understand the reason of its inefficiency. It is totally unfit for wet lands. The farmer should recollect that this is an application for his crop, and not for his land; in fact, that it does not improve the soil mechanically, but is acted upon chemically by the plants. It is more valuable on account of its sulphuric acid than its lime, and this is the reason why the purer the sulphate the better is the manure. When it is scattered on growing crops, either of two things occurs:

1st. That portion which is dissolved by the moisture of the earth, is taken up by the plant and deposited in its tissues; this is what happens when it is applied to clover or pulse.

2d. The soluble portion taken up by the plant is decomposed, the sulphuric acid uniting with potash or soda in the vegetable, and the lime becoming a carbonate, or sometimes the soluble sulphate is totally decomposed before entering the plant, by the vegetable ingredients of the soil, and one of its constituents—sulphur enters into the composition of the plant.

As gypsum is soluble, it should not be applied to the soil in wet weather, lest it should be washed away, nor in great drought, lest it should remain undissolved until the crop is ripe. Late in the evening, immediately before the dew falls, has been found an excellent time for applying it. The best season for top dressing crops with it, is in the spring, when vegetation has commenced and the soil is neither too wet nor too dry. Its effect on grain crops is not always beneficial, but on leguminous crops it performs wonders, and can not be equalled by any other manure. Its effect on different crops seems strange and capricious. It is not beneficial to the natural grasses, but on artificial meadow it is most powerful. It imparts to water its well known property of hardness. It can not enter the minute pores of the roots of plants in an undissolved state. It possesses a double advantage over other lime manures, it does not require burning but merely powdering before it is used, and it is easier dissolved, and of course enters sooner into the composition of plants. The sulphuric acid of gypsum can be decomposed, and its sulphur set free by heating it with decaying vegetable matter. Stange found sulphur in the sweet and bitter almond, and Garot extracted it from mustard seed.

Many interesting experiments have been tried for the purpose of ascertaining the effect of gypsum on various kinds of crops; some of them are worthy of notice. Two square perches of a field of clover belonging to Mr. Smith of Turnstall, near Settingburne, England, were set apart for trial: one perch received a dressing of gypsum, at the rate of five bushels to the acre, the other did not receive any manure. When the crop was mown, and afterwards cut for seed, the produce was as follows:

	Per acre.	Cut for seed.
Gypsumed part.....	60 cwt.	321 lbs.
No manure.....	20	20

Mr. Smith says that his cattle showed an extraordinary predilection for the gypsumed clover.

An experiment is recorded in "The Library of Useful Knowledge," in which five bushels of gypsum per acre were applied to part of a large field of clover: its effect in promoting the weight and luxuriance of the crop was remarkable. In November the entire field was sown with wheat; and the dark color and luxuriant growth of that part which had been gypsumed were apparent in the spring: when the wheat was threshed the produce was as follows:

Gypsumed part—33 bu's at \$2.25.....	\$75 00
No manure—20 bu's at 2.25.....	45 00
	\$30 00

This makes a difference of over forty dollars per acre in favor of the part manured with gypsum. The good effects of top dressing for wheat, clover, artificial meadow, &c., are well known to the farmers of Michigan, and by the completion of the Detroit and Milwaukee Railway, and the reduced rate of freight on this and other lines, they have now an opportunity for supplying themselves with this valuable manure. Some farmers complain that it retards the ripening of wheat, and other grain, making them subject to rust and mildew, &c.: this evil way be remedied by applying the plaster early in spring, or by adding a little salt: this latter substance promotes the vigor of every plant that it is properly applied to, and increases the weight and hastens the ripening of all kinds of grain. The urate of the "London Manure Company" is gypsum saturated with liquid manure, and this is so valuable that, although inferior to Peruvian, it is esteemed fully equal to African guano. Michigan should encourage her own mines, and consume her own minerals: her stores of iron, copper, plaster and coal are inexhaustible—it is time to begin to make use of them, instead of depending on a foreign supply.

M. Bonssingault, the eminent French agricultural chemist, addressed the following questions to eminent agriculturists residing in different parts of France, for the purpose of ascertaining the effect of gypsum on various crops. The reader can compare the replies with his own experience in the use of gypsum, making proper allowance for the difference in soil, &c.:

Question 1st.—Does plaster act favorably on artificial meadow? 43 answers returned—40, yes; 3, no.

Question 2d.—Does it act favorably on artificial meadows, when the ground is extremely wet? Ten answers—no, unanimously.

Question 3d.—Can it take the place of organic manures, or of humus in the soil; in other words, can a sterile soil with the addition of gypsum support artificial meadow? Seven answers—all in the negative.

Question 4th.—Does gypsum, in a sensible manner, increase the growth of grain crops? Thirty-two answers—thirty negative.

It will be perceived that the agriculturists of France think that gypsum has not much effect in increasing the grain crops; but this result is doubtless owing to the presence of sulphate of lime in the soil. The farmers of the United States and Canada are well aware of the fact that it does improve almost every description of grain crop, and acts powerfully in increasing the growth of forage plants. The soil of Michigan, at least that part of it which has been long in tillage, although naturally fertile, has been deteriorated by frequent cropping without manure; nothing will restore its fertility, so well as deep plowing, thorough drainage, and the application of barn-yard dung. Gypsum will increase the growth of the cereal crops, and, by producing a large amount of provender, give fa-

cilities for feeding large numbers of stock, these will contribute to their own sustenance by making that best of all fertilizers, barn-yard manure. Every farmer should use gypsum to increase the weight and luxuriance of his crops, and enable him to feed stock, improve his land, and enrich himself.

EDWARD MASON.

HOME NOTES.

The Henick Stock for Sale.

We note that Harness Renick, long a well known breeder of short-horns, offers his herd for sale. The sale will take place on the 15th of June at Circleville. All purchasers are to have from six to twelve months credit, according to the amount of their purchase.

The Wheat Midge.

A Mr. Dawson thus relates his experience with the wheat fly:

"I procured a quantity of the larvæ full-grown, and in that motionless and torpid state in which they usually appear when the grain is ripe. A portion of the larvæ were placed on the surface of moist soil in a flower-pot. In the course of two days the greater number of them had descended into the ground, previously casting their skins, which remained at the surface.

I afterwards ascertained that they had penetrated to the depth of more than an inch, and were of a whitish color, softer, and more active than they had previously been. The fact is thus established, that these apparently torpid larvæ when they fall from the ripe wheat in autumn, or are carelessly swept out from the threshing floor into the barn yard, at once resume their activity and bury themselves in the ground.

The larvæ thus buried in the ground were allowed to remain undisturbed during winter and spring, the flowerpot being occasionally watered. About the end of June they began to reappear above the surface, in the winged form; the little grubs creeping to the surface, and projecting about half their bodies above it, when the skin of the upper part burst and the full grown winged midge came forth and flew off. This completes the round of changes which each generation of these little creatures undergoes, and we have thus actual evidence of each stage of its progress from the egg to the perfect insect."

Mr. Dawson has recorded, also that a friend informed him that not less than four bushels of larvæ had been obtained from the wheat of eight acres.

Dr. W. J. Anderson of Canada, reports:

"When the maggot has been hatched early in the season, and finds the wheat in a favorable condition for its reception, it arrives at maturity before the harvesting, and according to Professor Aind, 'leaves the grain at the close of a shower or heavy dew, and wriggles down the wet straw to the earth.'"

So far as our own observation has gone, it has satisfied us, that the maggot as soon as it has reached maturity, does not attempt to leave the ear, but, becoming stiff and torpid, either is shaken out of the ear by the waving of the corn by the wind, or by the process of harvesting, and thus reaches the ground.

On arriving at the ground it is enabled by wriggling or some other process to bury itself there. It penetrates to the depth of more than an inch. There is considerable difference of opinion as to the circumstances under which this takes place.

A first rate two year old.

S. G. Patterson of Marengo, has now a white steer, of Short-horn stock which he raised on his farm, that will be three years old on the first day of June next. This steer is of remarkable growth, and is as thrifty as can be expected. Within the fifty days previous to the 20th of March he gained at the rate of 14 pounds in weight per day, and when weighed on the 16th, by John Evans, the postmaster, he was found to weigh 1825 pounds. This is a good two year, and we should like to hear of any one that can beat it.

G. W. D.

A new fodder plant.

A Mr. F. Williams of Sunderland has been growing a plant from seed called the Egyptian Millet, and which Professor Gray of Harvard University pronounces the *Bajree* of India, or *Panicum* Spicata of the botanists. The *Boston Cultivator* states that Mr. Williams has the seed of this plant for sale and he considers it the best crop for summer fodder for horses that is known, being sweet, and producing three crops in a season. Of the quantity afforded at each cutting nothing is said.

Experiments with Chinese Sugar Cane.

Mr. Editor.—According to promise, I now give you my experience in the culture of the Chinese Sugar Cane and the manufacture of syrup.

In the first place, I planted one rod square in the spring of 1857, in drills in clay soil, but the cane did not ripen so that any of its seeds grew. I crushed the cane about the first of October with a temporary crusher, but I am satisfied that I left a large amount of the juice in the stalk. I had thirteen gallons of juice, which I cleansed with the white of a few eggs and a little cream of lime, and skimmed the same well and boiled it down to about two and a half gallons, which was thick and pleasant, but had a sort of newish taste. I kept about a quart in a bottle corked up tight till new syrup was made again, and found the same as perfect and sweet as it was when made, without having that newish taste (or greenish taste, as some call it.) Hence I am satisfied that the syrup will keep any length of time if well made.

In the next place, I planted 2½ lbs. of seed which I bought in the spring of 1858, in drills on sandy ground, but scarcely as much came up as should stand on half an acre. I cultivated and hoed it so as to keep it free of weeds; and soon after the first frost in the fall, I stripped off the blades standing, and cut the cane up, and set it up in an empty ice house, where I left it until the last of November or the first of December. I think it would have been better if I had not kept it quite as long. I then crushed it with a small crusher of three iron rollers, which was so sadly deficient that I lost again a large amount of juice, but, notwithstanding, I made 87 gallons of syrup, besides wasting considerable in experiments which I will now relate.

The first lot I cleansed with bullock's blood and cream of lime and water of lime; but the more I put in, the blacker and the more unclean it got. The second lot I cleansed with white of eggs, cream and water of lime, and it was some cleaner, but equally as black as the first. The third lot I cleansed with milk only, and it was much cleaner.—The fourth lot I strained before boiling, (as I did all the others,) then brought it slowly to a boil, then took it off before it boiled much and let it stand a few minutes, then skimmed it well, then boiled and skimmed it the same the second time; then boiled it rapidly as possible to the consistency of syrup. This last lot was as clear and beautiful as any syrup you can buy, and had a delightful taste, with the exception of the newish taste before noticed. So that I am satisfied that the more stuff you put in for the purpose of cleansing, the worse your syrup will be, unless you have a bone black filter to run it through.

A word here about bone black, of which many of your readers may be ignorant. In sugar countries filters are made mainly of bone black; hence there are large manufactories for making it, one of the principal ones in this country is at Cincinnati. They take a quantity of bones, boil and roast them until the glue is all out, then they take two large kettles, fill one heaping full, put the other over it, and build a hot fire around them until the bones are charred. Then they pound the charred bones fine, put them into a mill and grind them and then bolt the flour. The finest is put up and is called ivory black, which is the principal ingredient of boot blacking, and can be got at most drug stores. The bran after the bolting is called bone black, and is used extensively as a filter for cleansing sugar and other substances. This cannot be got readily without sending to the manufactory, because, as yet, there has been no demand for it here. I think the use of it in cleansing our Chinese Sugar Cane syrup will not be any less beneficial than it is found in making common sugar. It is to be hoped that the experiment may be fully tried the coming year.

I have tried various ways with my best and my second best syrup to granulate it, but have utterly failed, as have also my neighbors. We have tried all the plans laid down by the papers, but with no success. I was shown one lot of sugar which was exhibited all through town as sugar from the Chinese Cane, but it was a humbug, as I found after tracing it out; it having been made out of the last five gallons of a barrel of the best family syrup bought in Toledo. I have, as yet, but little faith in the genuineness of sugar claimed to be made from the Chinese Cane.

But I believe the question is not yet settled whether sugar can be made from it. I believe, in the first place, that but very little Cane has been ripe enough yet to make syrup which will granulate, and that which was ripe enough has been so mixed up with the green and wish suckers as to injure the syrup for making sugar. I think that the Cane out of which we desire to make sugar should be kept

clear of suckers so that the whole substance of the plant should go to the main stalk.—As in common corn the suckers will injure the yield of ears, so will the virtue of Cane be destroyed by suckers. If the object is simply to make syrup, the suckers may in no way injure its quality, but the quality which will enable us to granulate it will be wanting. I hope that an effort will be made this year to perfect and ripen the main stalk, either by the means I suggest or some other, that the syrup from it may be kept separate from the syrup from the unripe stalks and suckers, that a bone black filter may be tried, and I shall not despair, if all these means are tried, of making sugar equal, if not superior to the sugar of commerce.

I have tested my Cane seed to see whether it will grow. I have about three pecks of what I suppose to be ripe. I planted some in a vessel with some corn and broom-corn, all the same depth. About one half of the Cane seed has come up. I find that Cane seed is harder and slower to come up than corn or broom-corn. The corn came up first, broom-corn next, and the cane last. Hence my opinion is that cane should not be planted as deep as corn, so that it may come up sooner and have more time to come to maturity. If the ground is moist it would be well to soak the seed a little before planting, but if dry it would be injurious to soak it. I was absent when my Cane was planted last year, and on my return I found that it had been planted of an equal depth with the corn, hence I presume the depth was one great reason why it did not come up well. The Cane was about a week or ten days longer coming up than the corn. I think seed raised here in this climate will grow better than that imported, if we can ripen it; and a week or ten days will make a vast difference in ripening. I shall plant this year between one and two acres to Cane, shall put on plenty of seed so that if it should come up too thick I can pull up part of it. I shall plant it shallow, and shall trim off the suckers from part of the crop, and endeavor to make sugar in accordance with the above views.

Now, Mr. Editor, the importance of the subject is my only apology for troubling you with this lengthy communication. Why should we not give this matter a fair trial?—If we can succeed in raising our own sugar and not be dependent on foreign production, subject as it is to a high tariff, we shall keep within our borders a vast amount of productive capital, and shall be so much the more wealthy and independent.

Yours truly, MICHAEL FISHBURN.
Monroe, March 7, 1859.

Chemical Properties of the Atmosphere.

BY H. R. SCHETTERLY.

NUMBER TWO.

Atmospheric air has been collected from different parts of the world, at the level of the sea and on high mountains; and, when pure, has been found, on being analyzed by the best chemists, to be composed of about twenty-one parts of oxygen and seventy-nine parts of nitrogen, by measure; or of 23.299 of oxygen and 76.701 of nitrogen, by weight. Some chemists say these two gases are united merely by diffusion, not combined chemically; but it is certain that the proportions are always the same, however united. A little reflection will convince the reader that there are various other substances contained in the air, in a state of diffusion, for all volatile substances rise from the earth into it; but all these, except some watery vapor and carbonic acid, are constantly washed out and brought to the earth by every rain. There is, however, another essential ingredient always contained in atmospheric air; but of which electricians alone have taken much notice. Chemists and Physiologists have alike ignored its agency in the operations of nature; except Faraday, who says it constitutes chemical affinity itself; and this ingredient is electricity.

The nitrogen of the atmosphere seems to be almost inert, while the oxygen combines chemically with most terrestrial substances, producing the various oxides and acids, which constitute a very large portion of the terrestrial globe, mostly in a solid state, though oxygen, when isolated, is in an aeriform state; in which it appears to act as an almost universal modifier of other substances by combining with them in all proportions; and hence it is generally regarded as being itself the agent that produces the various combinations in which it is found. Now, if electricity and chemical affinity be the same agent, as asserted by Faraday, then it is manifest—as the air contains a large quantity of electricity and receives a constant accession from the sun, while it is perpetually in contact with all terrestrial substances, that the electricity contained in the air, but not the oxygen, is the active primary agent by which all the infi-

nite variety of chemical operations in nature are performed; for it is unphilosophical to assume the existence of two everywhere co-existent and contemporaneous chemical agents. But to return—

Thomson's Chemistry shows that the purest rain water contains air, carbonic acid, carburetted hydrogen, carbonate of lime, and sometimes nitric acid, muriatic acid, and muriate of lime. These substances must therefore be found in the atmosphere, whence the rain brings them down.

Liebig insists that air also contains ammonia from which vegetables derive nitrogen; but Mulder denies that more than a mere uncertain trace of it is found in the atmosphere; and as ammonia is generally derived from decomposing animal and vegetable substances, and though it is volatile and therefore rises into the atmosphere, the rains wash it down, and vegetables absorb it directly from the soil by their roots.

Vewer has ascertained that, in the Netherlands, the minimum quantity of aqueous vapor in the air is nearly six parts, and the maximum more than ten parts, in one thousand parts (volumes) of air. No observations are recorded elsewhere; and the proportional quantity is of course variable everywhere.

Water is composed of one measure (volume) of oxygen combined with two of hydrogen by measure; or of sixteen parts of oxygen combined with two parts of hydrogen, by weight. And, if these two gases be mixed in this proportion and an electric spark passed through the mixture, they combine, forming eighteen parts of water, with an intense evolution of heat. Water may also be decomposed by electricity; but Faraday found that an immense quantity is necessary to decompose a small quantity.

Carburetted hydrogen gas is composed of carbon and hydrogen. It arises from wet decaying vegetable matter; and bubbles of it will rise out of water having decaying leaves at the bottom, when we wade in it. Carbonate of lime consisting of carbonic acid and lime, is found in rain water in the form of an impalpable powder.

Nitric acid is composed of oxygen and nitrogen, (the same ingredients as common air) but in different proportion. Thomson says it is formed in the atmosphere, by the passage of a current of electricity through the air.—Muriatic acid is composed of chlorine and hydrogen, and may be obtained from salt.—Mulder says it is set free from salt marshes by the action (the electrical action) of the sun. Muriate of lime is composed of muriatic acid and lime. All these ingredients are necessary to vegetable life; but carbonic acid, composed of eight parts of oxygen and three parts of carbon, by weight, is by far the most important substance contained in the atmosphere to the life and growth of vegetables; for, from this gas they separate nearly all the carbon of which their solid parts are principally constructed.

When vegetable substances are burnt in the open air, the oxygen of the air combines with their carbon in the proportion just stated, and the carbonic acid thus formed, the watery vapor containing the oxygen and hydrogen, and all other volatile substances contained in the fuel, are dissipated into the atmosphere: while the ashes left contain all the inorganic matter derived from the soil. But, if the external air be excluded from the process of incineration, only so much of the carbon as there is oxygen to combine with in the fuel itself, goes to the formation of carbonic acid, and is dissipated with the other volatile substances; while the remainder of carbon contained in the fuel, remains behind in the form of charcoal, which contains the inorganic substances also. The quantity of carbonic acid contained in the atmosphere is comparatively small, because growing vegetables consume it, by fixing the carbon, and throwing out the oxygen it contains into the air; and there are always growing vegetables enough, in some part of the world, to which the atmosphere conveys it. In ten thousand parts of air Saussure found the minimum of carbonic acid to be 3 15-100 and the maximum 5 74-100 parts, and other Physiologists generally agree with him. It is a little more in the night than during the day, and in large cities than in the country. And during the winter when there are no vegetables growing to consume it, and no wind for a time to disperse it, carbonic acid sometimes accumulates much in some localities.

Now, if there were no storms or commotion in the atmosphere to distribute the substances formed on the earth's surface to those regions where they are needed, they would accumulate where they are formed. Carbonic acid would destroy all organized beings in densely populated districts, while those sparsely populated would not have enough to sustain vegetation; for this gas is principally formed by combustion and by the respiration

of man and animals. Again, if it were not for the wind there could be no rain to irrigate the dry land, for the aqueous vapor would remain suspended over the waters from which it was raised till a change of temperature in the air, consequent on a change of season, would again precipitate it where it was raised. In fact, vegetables could not exist any where, and as these are the primary food of living beings, these too would soon perish if the winds ceased to blow. How admirably glorious are the contrivances and adaptations of the Creator! The more we learn of his wisdom, the more still appears beyond our reach. How can it be possible for a Philosopher to be an Atheist? or for a Christian to doubt the perpetuity of the Creator's goodness to all his creatures?

The "Lampas" in horses and their cure.

A correspondent of the *New York Spirit* who seems to be posted thus writes of the "Lampas" in horses; and very sensible it is, if correct:

"I allude to the Lampas. Although not a very dangerous ailment to the horse, yet it is very annoying to him, and very uncongenial to the tastes of most horsemen. The learned Dr. Webster spells it Lampas, and defines it to be "an accidental swelling of the fleshy lining of the roof of the mouth, immediately behind the fore-teeth in the horse, which soon subsides if left to itself," "sometimes called Lampas." As old Charley K—said when asked for his daughter, "this is strange talk to me." In a few particulars I beg leave slightly to differ with the very distinguished and learned gentleman. To my mind an accidental swelling is rather a phenomena. The exciting cause of the swelling may be said to be accidental. The swelling itself can hardly be so considered. Nor will it always "quickly subside if left to itself." According to my hypothesis it arises from indigestion; in fact, being simply one of the common symptoms marking the inception of an attack of indigestion in the horse. The horse rubbing his tail is again a symptom of Lampas. The symptoms characterizing Lampas, are a rough coat, sluggish gait, loss of flesh, with an unconquerable desire to lie down and wallow in the saddle, and to rub his mane and tail out as soon as hitched. One of the prominent exciting causes of Lampas is from feeding too soon, after great bodily fatigue, before the stomach has had time to recuperate its muscular energies for properly digesting its contents, digestion being a muscular as well as chemical process. I have seen something very similar to Lampas in human subjects, where digestion was illy performed. The usual remedial agents used for the cure of this troublesome affection is slitting the rugæ, with a sharp knife or getting a blacksmith to burn them out. The first is, in a great many cases, a useless waste of time, and the last not only cruel and useless, but actually injurious to the horse's teeth. It is the commonly received opinion, I believe, that none but young horses have the Lampas. Any horse, of any age, liable to a fit of indigestion, is liable to have the Lampas. I have seen it in horses of all ages and conditions. The contrary opinion I assert to be a popular fallacy. I have strong authority to back this assertion, it being no less a personage than my popular Uncle Davy W., whose theory as enunciated by himself on the race track is: "my young friend, if you want to win a pile lay your money against the favorite, for you may depend upon it the human family is prone to errar." It is true young horses are more susceptible to it, and why? because they are less accustomed to undergo fatigue, the confinement of stabling, and to being grain-fed; all of which being of themselves sufficient to produce indigestion. The fall of the year seems to be more favorable for its production than any other season. This may be accounted for on the supposition that more corn and other grain is fed at this season, and the grain being soft and succulent, the horse eats it with more avidity and rapidity, and, as a consequence, mastication is less properly performed, often swallowing considerable quantities of new corn unbroken. Those horses that bolt their grain will almost always in the fall be found rubbing themselves, and if you examine them closely you will find that they have a sour stomach and the Lampas in conjunction. I have no doubt horses in the western and middle states suffer more with Lampas than those at the extreme north, where they often feed on potatoes, etc., or at the far south, where they use pumpkins, etc. In my humble opinion, after considerable experience Lampas is as much a symptom of indigestion in the horse, as the scarlet rash is of scarlet fever in the human subject. Satisfied we are correct in our theory, what are the indications of cure to be adopted? We cannot expect to effect this by any local means or application. We shall need a stimulant to restore tone to the muscular coat of the stomach, an anti-acid to correct the acidity of the primæ riæ, and aperient to clear out the offending substance from the mal-treated stomach. Ginger is a

stimulant, soda an anti-acid, and aloes a tonic and aperient. Let us take a quarter of a pound each, mix together, and give our patient a tablespoonful morning, noon, and night in a "bran mash," or a light chop-feed, and I assert, in four or five days we shall find our patient cured. I have given this prescription to a good many friends for trial, who have used it, they say, invariably with success. Should constipation be a decided symptom, the quantity of aloes ought to be doubled or even trebled.

MICHIGAN STOCK REGISTER.
SHORTHORNS.

Numbers with an "e" following them refer to the English Herdbook—all others refer to the American Herdbook, unless otherwise noted.

No. 95.—JENNY LIND 8th. A roan heifer bred by Silas Sly and Sons, Plymouth, Mich., and owned by E. N. Wilcox, Detroit. Calved April 14, 1858.

Dam, Jenny Lind 7th, by Champion 1344; he by Regent 2115, out of Victoria by Marmion 100.
1 g. dam, Jenny Lind, by Regent 2115.
2 g. dam, Nelly Bly, by Nero 111, he by Ajax 2944e, out of Trim by Ajax.
3 g. dam, Nancy by Bethlehem 1254.
4 g. dam, — by imported Comet 1883.
5 g. dam, — by imported Nelson 1914.
6 g. dam, — of the Cox and Bullock importation of 1816. See Am. Herd Book, 2d Vol. Page 37.
Sire, Superior, by North Star 1941, bred by Geo. Vail of Troy.

No. 96.—NEW-YEARS-DAY. Bull. White, bred by and the property of John D. Patterson, Westfield, Chautauque county, N. Y. Calved January 1st, 1858.

Dam, Fanny Fern, by imported Harold 2d 1638.
1 g. dam, Dahlia, by Archer 3023e, 10, a bull bred by F. Rotch of Butternuts, N. Y.
2 g. dam, Delight, by Devonshire 966e, 51. This bull was imported in 1829, from the herd of Mr. Whittaker.
3 g. dam, Daisy, by Admiral 1608e, a bull imported by Admiral Sir Isaac Coffin.
4 g. dam, Yellow Rose, by Young-Denton 968a.
5 g. dam, Arabella, by North Star 460e.
6 g. dam, Aurora, by Comet 155e.
7 g. dam, — by Henry 301e.
8 g. dam, — by Danby 190e.
Sire, Ivanhoe 1688, by imported Harold 2d 1638, out of Victoria by Tecumseh 170.

Harold 2d, was bred by Robert Golding of Hanton, Kent Co., Eng., and imported by H. J. Cowden, Ripley, Chautauque Co., N. Y. He was sired by Harold 10300e, and out of Elfrida, by Hengist 10315e.

No. 97.—YOUNG ARCHER. Bull. Roan.—bred by and the property of John D. Patterson, Westfield, Chautauque county, N. Y. Calved May 31st, 1858.

Dam, Pocahontas, by imported Harold 2d 1638.
1 g. dam, Pocahontas, by Archer 3023e, 10.
2 g. dam, Pansey 2d, by Ajax 2944e.
3 g. dam, Sprightly, by Washington 1566e.
4 g. dam, Pansey, by Blaze 76e.
5 g. dam, Primrose, by Charles 127e.
6 g. dam, — by Blythe Comet 55e.
7 g. dam, — by Prince 521e.
8 g. dam, — by Patriot 486e.
Sire, Ivanhoe 1688, by imported Harold 2d 1638.

No. 98.—HIGHLAND CHIEF. Bull. Red. Bred by and the property of John D. Patterson, Westfield, Chautauque county, N. Y. Calved August 17, 1858.

Dam, Highland Lassie, by imported Harold 2d 1638.
1 g. dam, Lucy, by Bonaparte 298, by Duke 440, out of Countess 3d, by Wellington 1088, a well bred bull owned by the late Robert Arnold, of St. Catherine's, C. W.
2 g. dam, Fanny, by Lord John 1800.
3 g. dam, Roan, by Mayduke 102, bred by Adam Ferguson, C. W.
4 g. dam, Countess 3d, by Wellington 1088.
5 g. dam, Countess 1st, by imported Son of Comet 155e, 991.
6 g. dam, Princess, imported, by Lancaster 360e.
7 g. dam, Golden Pippin, by North Star 453e.
8 g. dam, — by Favorite 252e.
9 g. dam, — by Favorite 252e.
10 g. dam, — by Favorite 252e.
11 g. dam, — by Hubback 319e.
Sire, Ivanhoe 1688, by imported Harold 2d 1638.

No. 99.—FLORA 1st. Cow. White. Bred by H. J. Cowden, Ripley, N. Y., the property of John D. Patterson, Westfield, Chautauque county, N. Y. Calved March 15, 1857.

Dam, Flora Temple, by Rough and Ready 2154.
1 g. dam, Lady Lockhart, by Marnoch 1844 imported.
2 g. dam, Lucy, by Bonaparte 273.
3 g. dam, Fanny, by Lord John 1800.
4 g. dam, Roan, by Mayduke 102.
5 g. dam, Countess 3d, by Wellington 1088.
6 g. dam, Countess 1st, by imported Son of Comet 155e, 991.
7 g. dam, Princess, imported, by Lancaster 360e.
8 g. dam, Golden Pippin, by North Star 453e.
9 g. dam, — by Favorite 252e.
10 g. dam, — by Favorite 252e.
11 g. dam, — by Favorite 252e.
12 g. dam, — by Hubback 319e.
Sire, Ivanhoe 1688, by imported Harold 2d 1638.

No. 100.—JULIA. Cow. White. Bred by H. J. Cowden, Ripley, N. Y., the property of John D. Patterson, Westfield, Chautauque county, N. Y. Calved September 30th, 1857.

Dam, Highland Lassie, by imported Harold 2d 1638.
1 g. dam, Lucy, by Bonaparte 273.
2 g. dam, Fanny, by Lord John 1800.
3 g. dam, Roan, by Mayduke 102.
4 g. dam, Countess 3d, by Wellington 1088.
5 g. dam, Countess 1st, by imported Son of Comet 155e, 991.
6 g. dam, Princess, imported, by Lancaster 360e.
7 g. dam, Golden Pippin, by North Star 453e.
8 g. dam, — by Favorite 252e.
9 g. dam, — by Favorite 252e.
10 g. dam, — by Favorite 252e.
11 g. dam, — by Hubback 319e.
Sire, Ivanhoe 1688, by imported Harold 2d 1638.

No. 101.—LUCY 2d. Cow. White. Bred by H. J. Cowden, Ripley, N. Y., the property of John D. Patterson, Westfield, Chautauque county, N. Y. Calved September 24, 1857.

Dam, Lucy, by Bonaparte 273.
1 g. dam, Fanny, by Lord John 1800.
2 g. dam, Roan, by Mayduke 102.
3 g. dam, Countess 3d, by Wellington 1088.
4 g. dam, Countess 1st, by imported Son of Comet 155e, 991.
5 g. dam, Princess, imported, by Lancaster 360e.
6 g. dam, Golden Pippin, by North Star 453e.
7 g. dam, — by Favorite 252e.
8 g. dam, — by Favorite 252e.
9 g. dam, — by Favorite 252e.
10 g. dam, — by Hubback 319e.
Sire, Ivanhoe 1688, by imported Harold 2d 1638.

—Capt. Daniel Brown, the last survivor of the Wyoming massacre, died on the 3d inst., aged 88 years.

The Garden & Orchard.

Surface Dressing and Mulching Fruit Trees.

BY R. BRINGTON, LONDON, ENGLAND.

Some forty to fifty years since, it was a regular custom to dig, annually, all fruit-tree borders; for it was considered, that when the surface looked smart and fresh, there was, of course, good gardening beneath! As for minding the destruction of a net-work of those minute root organs, termed fibres, why, it came not into consideration, so long as the big, black roots, which shot downwards, were safe. In these times, sensible people not only forbear to dig over the roots, but actually set a decoy over them, to tempt these fibres upwards, and to secure them when obtained.—I need scarcely say, that the two practices are the very antipodes of each other. I here invite the particular attention of those who would practice rational gardening, to the very opposite nature of the two operations: surely no thinking person can pass them by as trifles.

And, perhaps, I may be permitted to show the necessary consequences of each operation respectively. There can exist no doubt of the following facts:

1st. Deep roots are in a cooler medium during the growing period, than surface roots.

2d. They have a tendency to produce wood of a less fruitful character than surface fibres.

It is pretty well known that the air we breathe, and the soil we tread on, are perpetually interchanging heat with each other; and that, on each returning spring, the earth has to be warmed anew, principally by borrowing from the atmosphere, to be repaid most scrupulously. If this be admitted, it is evident that the surface of the soil must first be heated, and thus warmth is transmitted gradually downwards. This being the case, it becomes necessary to inquire, whether the ordinary heat of the soil, without solar influences, would be congenial to fruit trees. It is, surely, needless to answer this. If, then, roots enjoy a considerable degree of warmth, why not shape our operations and practice accordingly? I have years since paid close attention to the results arising from deep digging over the roots of fruit trees; and have even known what might appear anomalous results accruing therefrom. The following are the usual phenomena, presented by a pertinacious course of practice of the kind. The trees become barren, their side branches fall gradually away, causing them to assume a lean and gawky appearance; they are apt to produce much watery, or immature spray from portions of the tree which had lost the true, or original branches; and that spray generally springs forth at, or about, Midsummer, and too late to be of any service to the tree. The terminal growths are apt to become long jointed, and, in many cases, the points of the shoots die, or become diseased. Moss is apt to prevail on the stems, if the trees be of some age; and, in general, trees thus circumstanced, are a prey to numerous insect, caterpillars, &c. These are a few of the evils; but, in addition, it will be found, that what may be termed the principal young wood, is produced late, and, by consequence, continues growing late, and thereby is generally immature, and caterpillars, and other enemies, seem particularly attached to the first made wood of such trees in the spring. I have seen Apple orchards, or gardens, within a few miles of where I write, thus attacked annually, until they became utterly worthless, the owners still hoping on; but some of these orchards have of late been rooted up. They were, for years, annually dug and cropped, almost close to the stems, with potatoes; and, what is worse than all, on the "lazy bed," or raised bed system, in which case the soil has to be excavated a foot in depth, to soil the potatoes with.

But now let us, for a moment, cast our eyes on trees undug, and well-rooted in a proper soil, with abundance of fibres nestling just under the surface. It is almost needless to look for moss on the stems of trees thus situated, their bark generally shines with a polish of a very different character. Their early-made shoots progress with rapidity at the very period (June) when the ill used trees receive their first snubbing with blight. But their young shoots are compact and short-pointed, presenting, altogether, a very different appearance from the attenuated character of the young wood of the other class.—Much less interior, or watery spray will be produced; indeed, with trees well managed on the platform system, scarcely any. The trees having freely and heartily made their first growth, generally begin to solidify about

the period when the ill-used trees are beginning to ramble (August); and, if any second growth is made, it is short, firm, and soon ended. As for dying points, there will not be much trouble concerning them, if the surface soil is genial and undug; unless tap roots have been permitted, when the trees will be, in part, liable to the grievances complained of in the other class.

It is almost needless to add here, a description of the respective results: in the one case, dwarf, compact, comfortable-looking, and fruitful trees; in the other, gawky and barren skeletons, a discredit to the gardens. And, how could it be otherwise? It must be obvious to any one, on the slightest consideration, that when the surface-roots of any tree are annually mutilated, for eight or nine inches in depth, that what roots the tree has remaining, must be several weeks later in receiving the necessary amount of ground heat, produced by the return of summer, than trees whose fibres are just beneath the surface.—The effect is, as before stated, the well-cared for tree makes its early growth with the adjunct of a lively root action; thus bidding defiance to the extreme ravages of insect foes. The tree, dug over, is impelled to growth in the shoots, by the heated atmosphere, weeks before the deep roots are put in active motion; here is, surely, some difference in conditions! The early growths of the latter are almost sure to suffer in some way; they are in little better position than a cut down stump, thrown across a brook; such as we all have seen many a time, attempting to shoot as springs return. The first growth being foiled, we arrive, probably at, or near Midsummer, when the sun has warmed the soil to a greater depth, and the ill-fated tree, clinging with tenacity to life, makes another bid for an annual growth. But, as before observed, our autumns are not long enough, and hot enough, to mature this growth, and, at last, a morbid condition is the consequence, and the cultivator cuts the tree down in despair.

I have stated this much, as paving the way to a few remarks on the immense benefits arising from a system of coaxing surface or shallow roots. This is called by various names, as surfacing, mulching, top-dressing, &c.—But here let us distinguish a little. These various names should be reduced to two processes, which are, indeed, somewhat distinct, viz: mulching and surface dressing. Mulching, in the practical gardener's acceptation, means applying half-rotten manure over a tree's roots, to prevent them becoming dry.—It is intended to obviate the necessity for the watering-pot. Surface-dressing is specially intended to induce, and preserve, surface roots.

Now, there are more ways than one of performing these operations. As for mulching, to preserve moisture, that needs little description; it seems specially intended to avert solar influences, which we invite, in these times, to tender fruits; and is, indeed, confined chiefly to trees of coarse, or hardy habits, and which depend not so much on ground heat. With regard to surfacing, we must remember two things: first, that the material should have a capacity for receiving and transmitting warmth; and secondly, that it may prove, ultimately, an abiding medium, adapted to the needs of the roots thereby induced. I find nothing superior to chopped loamy turf and vegetable matter, such as half decayed tree leaves; these, in about equal quantities, furnish an excellent material. If the loam is very adhesive, I mix some charred rubbish with it. Indeed, I prefer the latter course, as it makes the whole darker; and, doubtless, assists in the absorption of heat—a material point with tender trees.

Now, what I would recommend is a surface dressing annually to choice fruits, although it be only an inch, or a little more.

If some persons, who understand these things, think that annual transplanting is not too expensive a process, why, surely it cannot be supposed too much to apply a little dressing, on the same principle as we mature a piece of cabbage or celery ground, which, of course, is an annual affair. It is most strange that people should so neglect their tender fruits. There seems to have been a general impression that a fruit tree, once planted, should fight its own way; and, indeed, with ordinary coarse-growing orchard trees, such is obliged to be the case. But this does not prove that an annual attention, as much as is awarded to any ordinary crop, will not prove profitable. Talk of profit, what so unprofitable as coarse fruit trees, unfruitful, and smothering other crops, from year to year? The proprietor feeding on delusive hopes, instead of apples, pears, &c. Here lie the reasons why so many fruit trees are unsatisfactory; but let it not be, for a moment, supposed that I blame practical gardeners, as a body, for either ignorance or apathy in the affair. This

is not so much a question of manures, as of labour; and hundreds of gardeners, of the less fortunate class, pass by trees thus situated, simply because, whilst attempting to push one matter to its utmost, something else must be set aside. In many cases, an extra laborer, for awhile, would set all right. And, indeed, to aim at the highest perfection in the numerous things which pertain to modern gardening, is no mean task to mark out; and necessarily involves expense in one shape or other. But bad gardening is no better than bad farming; and there is nothing like carrying out the object to its full extent, although such may limit the desires in other respects.

But, to return to the surface-dressing for a moment. There is a time, as well as a mode of applying it. I here advise that a few main points be kept well in view. In the first place, I urge that late in spring is the most eligible period. I would have this surface-dressing retain surface-moisture, when it can be secured. This, however, pre-supposes that the trees are on sound platforms, or otherwise so situated, as that no stagnation can possibly occur. It is of the utmost importance, with tender kinds of fruits, to permit the solar rays, up to the very end of May, to enter freely. Applications of this kind should, therefore, be withheld until the object be accomplished. And it is of importance that this covering should succeed on the heels of a liberal spring rain, provided the preceding period has been somewhat dry, which is frequently the case. Surface-dressing, in my opinion, is, therefore, best applied in the last week of May, or the first week in June; but as to weather, we must of course, leave a margin on its behalf.

We may now consider the thickness most eligible. It may have been observed, that if the compost applied is one-half vegetable soil, such will diminish by decay into a very small compass; therefore, the loam alone may be counted on as permanent depth. If annual dressings are applied, I consider two inches sufficient; if biennial, three inches may be applied. Care should be taken, during the succeeding summer, not to cut away, by any operation, the surface fibres, which are sure to be encouraged thereby. If any weeds appear, hand-weeding may be resorted to.

Here let me point to the evil influence of tap, or forked roots. If trees are carefully transplanted, and root pruned, whilst young, these roots will seldom occur; but if such has been neglected, care must be taken, at the last planting, to cut away all coarse and fibrous roots having a downward tendency.

I before adverted to what gardeners term mulching, and may here offer a few remarks. I observed, that it was practiced chiefly with the more ordinary kinds of fruit trees; such, indeed, as are perfectly at home in our climate. As for mulching heavily, as is the practice with some; spreading raw manure, nearly six inches in depth, over the roots, nothing can be worse, even as regards hardy fruits. This kind of manure is exceedingly sluggish, in conducting the solar warmth to the cold soil beneath. Let any one observe heaps of such manure wheeled out to the kitchen garden, in a frozen condition, and it will be found, that the interior will remain frozen for a long time after the soil is thawed. For newly planted fruit trees, which require to be mulched, I would strongly recommend half-decayed tree leaves, as being warmer in character than the manure. Of course, the mulching of dung need not be applied for the sake of its manurial qualities, since opportunity was afforded of putting rich soil, if needed, to their roots in the act of planting. In fact, the only way in which this raw mulching is justifiable is, I think, when, after much planting, the operator feels assured he shall not be able to spare labour to water his subjects, in cases of drought through the summer.

The surface-dressing here recommended is of much value to all trained fruit trees; and, in course of decomposition, becomes filled with fibres. The spade is, of course, banished from this dressing, and as it solidifies, it becomes perfectly united to the body of the soil.

Whether, then, cultivators choose, or find it convenient, to use surface-dressing annually, biennially, or as the maggot bites, it is a principle of high importance in the culture of tender fruits; and I cannot recommend it too strongly to their notice.

Rapid growing Trees and Shrubs.

The best rapid growing trees of large size are the Dutch or Cork Elm, the American Weeping Elm, and the Ash-leaved Maple. These do not throw up suckers, and are easily removed of any size. For localities near water the American weeping Elm is recommended.

The best rapid growing shrubs for forming handsome thickets, screens and groups, are the Privet, the white Lilac, the Carolina Syringa, the Cornelian Cherry, the Venetian Fringe tree, and the upright honey suckles.

A Farmer's Garden.

BY RUSTICUS.

MR. EDITOR:—It is seldom that we find a good garden attached to the farm-house as a necessary appendage to its comfort. Wherever a garden is found, it is a sign that all else about the premises is right. However, I am not about to write a dissertation on the signs indicated by a garden. What we want to bring to mind at this season, are the varied productions which a garden affords to the household, if a little foresight is used in its culture and in laying it out.

We should look to the garden to supply the house with vegetables of various kinds, as well as with a large quantity of the smaller fruits. But the great difficulty to be overcome, lies in the fact that time is very unwillingly given for the cultivation of a garden, as there is so much manual labor needed in it, at a season when it cannot be spared from the farming labor. Besides, there are few amongst the members of the family who like to handle the spade. All are accustomed to do their work with the horse or the hoe.—Still, there are many of the garden vegetables that may be worked with the horse, if the garden is laid out with the design of having it worked in that way.

If we suppose a garden to consist of an acre, and desire to have it so laid out that it will be most easily cultivated with horse power, it should evidently be planned of an oblong shape, with the rows running the shortest way. An acre laid out or measured off so that its length will be greater than its breadth in the proportion of 3 to 2, will have its longest side nearly fifteen and a half rods, and its shortest ten and a quarter, or it will be 255½ feet the long way and 170½ feet on the short side.

At each end on the short side, it would be well to leave a strip of sod or grass land, from ten to twelve feet in width, which would afford a good turning place for the horse or team, in using the plow or cultivator. This might or might not be included in the acre, according to the liberality of the owner in the plan of the garden.

The garden thus laid out could easily be divided by rows of fruit trees or bushes, as might suit the taste of the owner. For instance, commencing with one of the sides, there might be a row of the Red Dutch currants, first on the outside, each bush being set eight feet apart, would allow a row of 21 in number along the sides; from these rows of currants, a stretch of 21 feet in width might be laid out, and there could be a row of white currants: again twenty-one feet more and a row of gooseberries, interspersed with peach trees, at distances of thirty feet, the gooseberries filling up the spaces between the trees. Again a row of Red Antwerp, or Fastolf raspberries at the next twenty-one feet, the raspberries being set four feet in the row. The next row a trellis for grapes, with a vine every fifteen feet apart in the row. The next a row of the Lawton blackberry, set four feet apart like the raspberries. The next row one of quinces, with cherry currant bushes intervening between the trees. The next, currants or raspberries, as the taste of the cultivator may fancy, with a row of the white Morris peach, for household use, and more gooseberries, peaches, or other fruits as might be thought best by the cultivator. The whole divided off in the plan suggested, would have twelve beds or divisions, each of which would be twenty-one feet wide and one hundred and seventy feet in length. Each of these divisions could be treated with the plow, and if necessary could be either subsoiled or trench plowed, as might be found most convenient or serviceable. It could be tilled with the cultivator and the double harrow, and also with the roller, if the art of using these implements in a handy manner was familiar to any of the men about the house. The sward land at either end would save all trouble in keeping walks and pathways clean, the scythe in the spring and summer season would require to be used to keep the grass from growing too rank on it, or going to seed.

One of these divisions would probably be required for the smaller kinds of vegetables which are not susceptible of cultivation by the horse, and the herbs which are needed for various household purposes, and might be kept for the asparagus, the lettuce, parsley, summer savory, chives, mint, and radishes, and other productions, which are annually grown at no particular place in the garden, but are generally scattered apart in any and every direction.

In a piece of ground laid out in this manner, the rows should run north and south if possible, as the plants and trees will thus get the benefit of the sun for ripening purposes, in the greatest degree.

The divisions being thus set off and num-

bered from one to twelve, it will be found that their cultivation and care will not greatly interfere with other work, if the manuring, plowing and sowing be done in the proper time. In the first place, it will easily be seen that the manure for each of the beds which require it, may be hauled on at any time whilst the ground is hard in the winter, and the plowing may be done at such times as may be convenient, before the crops are put in the ground, and not all at once, if time can not be spared. Each bed being twenty-one feet in width, and the plow turning over the furrow to the depth of at least twelve inches and a width of thirteen, would require not over eighteen furrows to be plowed in each, or less than one hour's work. If the ground is not stiff, a single light harrow, with numerous teeth, will make the surface almost as fine as the hand rake, if it is harrowed over sufficiently, and certainly in good enough order to grow the peas, beans, cabbage, beets, carrots, melons, cucumbers, onions, sweet corn, tomatoes, squashes, and other vegetables generally used in the kitchen of a farm house; what the harrow does not effect, the roller will if applied.

Let us look at the cultivation of the pea crop in such a bed. On either side, throughout its entire length, are two rows of fruit bushes, the one, perhaps, currants and the other raspberries. If these have been set out for two or three years, it will be necessary to leave one and a half feet on each side which will not be plowed, but which can be worked with the cultivator, or a scarifier.—This will leave eighteen feet for the crop. We may then lay out the bed so that each row of peas will be 2½ feet apart. But as there are two kinds of pea which may be grown, and one which requires much more room than the other, it will be found much more economical to have the dwarf pea and the tall marrowfat varieties alternate, the dwarfs having the two outside rows, and alternating each row in the seven which could be sown, with the tall marrowfat. The space being two and a half feet between each row, it could be kept perfectly clean with the horse hoe, and when the dwarf peas had served their purpose, the ripe straw could easily be raked out of the way, and a space of five feet would thus be left between the rows of the tall kind. When both kinds had ripened and been used up, the whole bed might again be manured, plowed, and sown with a crop of fall turnips.

The same plan could be pursued with the dwarf and pole beans, the pole beans being placed in the alternate rows, with a space of five feet between them.

The whole of this system depends on the knowledge which the owner has of operating with the plow and harrow in the drill, and thus having as little hand hoeing to do as possible. Of course some will be necessary, but if the plow and the cultivator are each made to do all they can perform, the work by hand will be light, and occupy but little time.

I shall probably favor you with some more ideas on Farmers' Gardens, if you find this acceptable.

Treatment of Peach Trees.

R. Seamans of Cecilton, Maryland, thus gives his plan of treatment of peach trees which he cultivates on a large scale:

"The trees should be wormed every year, and the second year the dirt should be taken away from the trees, and a shovelful of wood ashes thrown around each tree, when the trees are six years old; take the earth from the trees and off the roots for two feet out; worm well, and scrape the bodies, from the roots to a foot above the ground; take a scraper like a vessel mast scraper and scrape all the rough bark off the tree; then make a solution of strong pickle and quicklime, have it of the consistency of thick white-wash, and make a mop of sheep skin, and mop the trees well, from the roots up a foot above ground; do this in the month of May; let them remain so a week, then throw back the earth with a plow.—Trees will not require anything more done to them but good cultivation and liberal manuring. Everything likes rich earth."

Pruning Peach Trees.

The same cultivator, also favors summer pruning. He says: "Pruning should be done in May and June, but not in the winter, as is the opinion of some fruit growers. I will give some reasons for spring and summer pruning: If you cut off a limb of any size in the winter, the bark dies around the stump from which the limb was cut, and does not, for a long time, if ever, cover the stump; whereas, on the contrary, if cut off in May or June when the sap is in full flow, it will go on to grow, and if not too large, cover the stump, the first year. The tree should be trimmed well out of the middle, so as to give the tree and fruit air; limbs that incline to grow straight out, should be cropped, or shortened, so as to give the tree an upward tendency. Trees should be trimmed up, so that a team of horses can work under them without barking the limbs; single-trees should be muffed, so as to prevent barking the trees."

Raspberries and Blackberries.

There are many who will try the Lawton and the best varieties of the Raspberry, but before putting them into the ground, the soil should be well dug to the depth of fifteen to eighteen inches, and the rows well filled with stable manure and coal ashes. Both the Raspberry and the Blackberry like a cool deep soil, and the wild varieties are generally found flourishing best where the soil is rather moist, and the muck is rich in vegetable matter.

Blood Horses.

FROM THE SPIRIT OF THE TIMES.

As it is very clear that the horse is almost, if not absolutely, essential to our protection, comforts, necessities or amusements, in nearly every step of our progress through life, it is certainly of the highest importance that he should be rendered as beautiful and serviceable, as valuable and perfect as possible. This can only be accomplished by the greatest care and strictest attention to the improvement of his breed. Some contend that racing does the most effectually test his durability, activity and soundness; as a horse that can acquit himself in this, proves that his bones, muscles, lungs, and appendages, are sound, well proportioned, and entirely capable of performing their proper functions in the best manner. If any defect exists, this severe exercise will bring it into view. Such trials clearly establish his strength, soundness, activity, and endurance—and that from such a horse it would manifestly be safe to breed, that his produce would unquestionably be much more likely to excel in those essential qualities than the produce of a common horse: that to breed to such you will be sure to have superior horses, whilst the expense of keeping a good one is no greater than that of keeping a bad one—if it costs as much.

The thoroughbred or pure blood is superior to every other variety, and the quality of the nags of this country will be found, on investigation, to correspond precisely with their breeding, declining in proportion as they recede from the acknowledged thoroughbred. Blood always tells everywhere: no inferiorly bred horse can get through mud, or a heavy country, like full blood—none can come up so well to the finish of distressing work, or return home so cheerful after the toilsome business of the day. A thoroughbred horse is rarely ridden off his feed, and however severe the exertions of the day may have been, he will generally feed readily on reaching his stable, and if too severely tasked he will rally sooner than those of colder blood. It has been said, falsely, that thoroughbred hacks are more likely to stumble and fall than those of baser blood: this is a mistake; if the shoulder possesses the correct obliquity, the horse will not come down if properly treated.

For all the lighter kinds of draught, the thoroughbred horse is decidedly preferable, and even for farming purposes a copious infusion of what is called blood, will be found a great improvement: a class of animals is thus produced, more vigorous and stronger, more active, and capable of enduring much greater and more long continued fatigue, than those that are at present in general use.

The term blood has reference to the quality of the animal as well as to the fluid which circulates in his veins: the pure or genuine blood, as it may be termed, standing alone as respects the powers of speed and capability of supporting fatigue, in consequence of his texture and conformation.

The following are some of the many reasons why the stock of the high bred, or warm blooded racer, is vastly superior to, and more valuable, than the stock of the common horse:

- 1st. They have more and better brains, or more sense—more intelligence—and their disposition is more kind and tractable.
- 2d. When properly viewed they have a refining and elevating influence. Christianity has tamed and civilized man—man with his refined sensibilities has semi-socialized the horse, and now he seems to be happy, as he shares the kind feeling and ministers to the happiness of man: "As a man soweth so shall he also reap;" where Deity creates, 'tis surely man's dignity to cultivate.
- 3d. They are more free from disease; their action is more free and elastic; their proportions are more accurate; their form is more beautiful; and their carriage is more elegant and showy.
- 4th. They are more active, and can endure excessive heat much better. A fine blood horse can travel long distances rapidly in the hottest weather, when a common horse would probably fall dead under the same exercise.
- 5th. They live to a much greater age. A common horse rarely lives to be of any service beyond fifteen or sixteen years of age, but a high-bred, warm-blooded one is fit for good service for a much longer time, if he has been treated as every man ought to use his horse—some so called men are greater brutes than their horses.
- 6th. Their superior strength, ability to carry heavy weights, and endure under it; their courage and bravery, fleetness and durability, render them far more efficient for cavalry, express, or general purposes, in the precise rates that they are judiciously imbued with pure blood: invariably evincing more gratitude

to, and attachment for, a kind master.—Pause candid reader, and look for a moment at the evidence to sustain this proposition; the weight carried by an English hunting horse varies from 182 to 288 pounds; this must be borne over all inequalities of ground, heiges, ditches, and every other obstruction, and nothing but pure blood, with sufficient height and reach, can carry the weight, go the pace and do the work quite well.

In the days of English staging, coaches containing from 12 to 15 passengers, in addition to the guard and coachman, and from half a ton to a ton and a half of baggage, were driven from 15 to 17 miles an hour.—The horses by which such heavy and rapid work was done were as nearly thoroughbred as could possibly be procured: nothing but these could have done it once. That speed and power the people demanded before railroads were formed: it had to be done, and it was effected by there being thoroughbred horses found and applied to staging purpose. The average weight of an English huzzar, or light Dragoon, fully accounted and in heavy marching order, is 250 pounds; that of a heavy Dragoon 280 pounds; and that of a light guardsman, or cuirassier, 308 pounds. Great power is of course required to carry these ponderous masses, but great speed is also required to move them, for unless they can be launched at a tremendous rate, all the horses being so equal in their pace and stride that the line is kept perfectly dressed and even to the moment when the shock is to be given, the charge is a failure. To attain this immense power and great speed, even for a short time under such crushing weight, in the actual charge, and to combine with it the power of staying long distances, coming again quickly, moving actively, and enduring severe distress, nothing but the highest possible degree of blood that can be combined with bone, size, shape, and action, sufficient to endure such weight, can succeed at all. This can be and is obtained by the crossing choice blood stallions of the proper build and style on proper selected mares to the second or third generation. In the Russian war the light brigade of Lord Cardigan, which made that prodigious charge and retreat, each of a mile and a half, was mounted on horses that were three parts blood. It is safe to say that if they had only been half-bred, not one horse would have got back into the British lines, and if they had not possessed any pure blood at all, they would all have been cut down before they reached the Russian batteries.

The heavy brigade of Brigadier General Scarlett, which rode through the Russian troopers in fourfold force, as if they had been lines of pasteboard, were mounted on chargers having two crosses of pure blood, or as nearly as possible.

Nothing but blood could have accomplished either feat; and it is well to remember that when cavalry meets cavalry in the deadly shock, both being equally brave and equally well led, that cavalry which is horsed on chargers of the same weight, but of inferior blood and stride, must go down like grass before the scythe. On the turf contending against each other, on the field of battle facing the death dealing column, on the road at heavy weights with great speed, or under the saddle with heavy weights and long continued high speed, we are convinced by authentic records or observation, of the superior power and speed, endurance and courage, sagacity and attachment of the thoroughbreds, and that they only being well qualified for the above uses, they are the best, and the best able, to do any thing else. This is the pride and triumph of blood, that it can do every thing for which it is intended quite well, and nothing short of it can do so.

7th. The horse having and exhibiting evidences of his kindred to the pure blood horse will always command a higher price in the market. Ignorance, prejudice, and various other causes, prompt some men (?) to cry down blood, yet these very same—in nearly every instance where they have a horse to sell or advertise, take a very short trace to some noted thoroughbred, or exhibit him at an agricultural fair with a manufactured pedigree of a "blacksmith shop bill." We have had "thoroughbred horses" (?) not a thousand miles away, that were represented as no less than the great-grandson of the great English Eclipse himself, and they only about three years of age. There's a better day a coming; the day already dawns, the shadows flee away. Truth crushed to earth will rise again. To the lover of a horse his financial value is only a nominal or secondary consideration; he loves him for his own sake; to him "a thing of beauty is a joy forever;" others regard in their horse great bulk without corresponding excellence, and matter regardless of life or spirit. Let such a one study the subject, search the records, weigh the evi-

dence, reason calmly, and decide with an impartial and unprejudiced mind; not like the man that may say—"I won't believe if you do convince me."

The true office and utility of the thoroughbred horse is to raise the standard of speed, spirit, and endurance, which can result only from blood, in horses for all and for every purpose—the road, the hunting field, the shock of the battle, if we must have war; for pomp, show and beauty; for speed, for courage, for heavy, long continued every-day service, and if bountifully fed, well groomed, carefully housed, and well driven, will endure for many years. To breed judiciously from thoroughbred horses will raise the progeny in excellence, utility, longevity, style, action, beauty, appearance and value; confine your breeding to grade stock, and instead of improvement, or even "holding your own," your stock will go downwards all the time.

The thoroughbred or pure blood horse, excelling in every good quality, renders them of course more valuable in all respects than the common or cold blooded horse, and proves conclusively that every person in the community has a deep and abiding interest in aiding in the cultivation of the pure blooded breed.

The Locust in 1859.

FROM THE NATIONAL INTELLIGENCER.

MESSRS. GALES & SEATON:—The locust will appear the approaching spring in seven different districts of the country, viz:

1st. In the whole Valley of Virginia, from near the top of the Blue Ridge Mountain on the east, the Potomac river on the north, to the Tennessee and North Carolina lines on the south, and several counties on the west. They will probably occupy a considerable portion of both North Carolina and Tennessee, overlapping other districts.

2d. In North Carolina, from Raleigh to Petersburg, Virginia, and adjacent counties in both States.

3d. In St. Mary's county, Maryland, the southern part of the county, occupying about one-half the county.

4th. In North Carolina, Rowan, Davis, Cabarras, Iredell, and adjacent counties.

N. B. The above are all of the northern tribe, or seventeen years' locusts, and will commence emerging from about the 5th to the 15th of May.

5th. In Georgia, Gwinnet, DeKalb, Newton, and adjacent counties.

6th. In Tennessee, in the northern middle part.

7th. In Mississippi, in all the eastern portion of the State, from the ridge on "backbone," that runs north and south about forty-five miles from the Mississippi river to the eastern boundary of the State, and probably extending into the States on the east.

The three last districts belong to the southern tribe, or thirteen years' locusts. They will begin to emerge about the 20th of April in the extreme southern districts in Mississippi, to the 5th of May in Georgia. I ask the favor of editors of papers in the districts mentioned, and wherever the locusts may appear, to notice this, and also to notice the fact when they do appear, and send me a copy of their papers containing the notice.—I also ask the favor of gentlemen residing in the districts to inform me by letter of the fact of their appearance. If the locusts appear this spring in any other part of the country than those indicated, I should be informed by those residing there.

Respectfully, GIDEON B. SMITH.
Baltimore, Md., Feb. 19, 1859.

How to Clean Wells of Carbonic Acid.

Carbonic acid is composed of three parts of pure Charcoal (Carbon) combined with eight parts of Oxygen. It is formed principally during the process of combustion; and in the blood of living beings in which the oxygen of the air they breathe combines with the carbon contained in the food they eat, to produce animal heat; and it is then separated from the blood in the lungs and expired. Vegetables inhale it through their leaves in which it is decomposed, the oxygen being exhaled to sustain animal life, and the carbon fixed to supply mankind with food and fuel. Thus man and animals prepare the air for the use of vegetables; and vegetables purify it again for the use of man and animals, and to supply them with food and fuel besides.

Carbonic acid is also a constituent part of many other substances, such as limestone, chalk, magnesia, etc., from which it may be expelled by heat and by other means. It is also the air which issues from soda-water, beer and wine, when they foam, and from fermenting malt, yeast, etc. It is about one-half heavier than an equal measure of atmospheric air, and mixes with it in proportion of from four to five of the gas to ten thousand parts of air. But when supplied in the sources mentioned above, in greater

quantity than the air can diffuse, the gas floats about on the earth's surface, and sinks into pits and wells. Pure water absorbs a little more than its own measure, and, when running through wells, carries the gas off; but, when stagnant, the superabundant gas floats on the surface, and sometimes almost fills the well.

Carbonic acid extinguishes fire like water, and, being the only gas so abundantly produced by natural causes, that is heavier than atmospheric air, it is the only one that collects in wells in sufficient quantity to be dangerous. Therefore no person should ever enter a well without first letting down a light. If it continues burning there is no danger; but if it is extinguished, the well may be filled up with drying men to rescue the idiot who descends first. And this means of ascertaining whether the well is pure ought to be repeated every time a person descends; for sometimes sufficient gas to cause death collects in a single night.

In burning lime the carbonic acid is expelled from the stone, and the lime remains behind. And so strong is the attraction (affinity) of lime for this gas that when Chemists suspect its presence in a mixture of other gases on which they are experimenting, they pass the mixture through lime-water, which purifies it effectually. The carbonic acid combines with the lime forming carbonate of lime, which is precipitated in the form of a white powder, and is harmless.

Now, when, by letting down a burning candle, it is found that a well contains carbonic acid, it is only necessary to pour down a sufficient quantity of lime-water to take it up; and, if a person lies senseless at the bottom, this is the best, if not the only means to rescue him from certain death; and it is infallible.

Grand Traverser.

H. R. SCHETTERLY.

Root Crops in Canada.

The Canadian *Agriculturist* contains a very excellent article on the economy of Root crops from the pen of Wm. H. Beresford, and as the climate and soil of Canada West differs but very little from that of Michigan, many of his suggestions apply with great force to the Agriculture of this State. He says:

"Every Canadian farmer could with perfect ease devote every year a portion of his land to roots, five acres at least to every hundred in cultivation. By so doing he will be able to maintain more stock, obtain more manure, and produce more wheat per acre than under the present system. The nutritive matter contained in an acre of turnips is great. In a crop of 20 tons, or 45,000 lbs., there are 900 lbs. of thick or woody fibre; 400 lbs. of starch, sugar, gum; 670 lbs. gluten; 130 lbs. of fat or oil; and 300 lbs. of saline matter; total 6000 pounds.

A crop of 25 tons, or 55000 lbs. (933 bushels) per acre, of carrots, contains 1680 lbs. of husk or woody fibre; 5,600 lbs. of sugar; 840 lbs. of gluten; 200 lbs. of fat; and 800 of saline matter; total 9,120 lbs.

The quantity of nutritive matter afforded from a crop of Mangel Wurtzel, of 20 tons, or 45,000 lbs. per acre, consists of 900 lbs. of husk or woody fibre; 4,950 of starch, sugar, &c.; 900 lbs. of gluten; 450 lbs. of saline matter; total 7,200 lbs.

From a crop of oats at 50 bu. per acre, the 50 bu. weighing 2,100 lbs. we obtain 420 lbs. husk or woody fibre; 1050 lbs. starch; 300 lbs. gluten; 100 lbs. of oil; and 80 lbs. of saline matter; total 1870 lbs.

A heavy crop of wheat at 60 lbs. to the bushel, the weight of grain per acre would be 2,700 lbs. The amount of nutritive matter from an acre of Indian corn, at 30 bushels to the acre, amounts to 1703 lbs.

From an acre of peas at 25 bushels per acre, 1,392 lbs.

These facts put in tabular form will give the following results, which are more easily compared when brought together under the eye.

	Yield per acre of nutritive matter.
Turnips.....	6,000
Carrots.....	9,120
Mangel Wurtzel.....	7,200
Oats (50 bu.).....	1,870
Wheat.....	2,700
Indian Corn (30 bu.).....	1,703
Peas (25 bu.).....	1,392

"The use of carrots on a farm is well known to those who cultivate them. The seed should be sown early in the spring, the land having been well worked, for the carrots delight in depth and openness of soil. The grand use of carrots on a farm is for strengthening and medicinal food to horses and cattle. A gentleman of my acquaintance was very successful in giving them last spring to his horses, when they were recovering slowly from the influenza; they greatly promote the health of animals. The difficulty attending the sowing of the seed of the carrot operates against any large breadth of land being devoted to its culture. They should occupy however, some space in every root field of the farmer. The long red mangel wurtzel, the globe orange, and the red turnip-rooted are eminently suited for culture in this country; they are suited

to a much greater diversity of soils than the turnip. On peaty soils on the reclaimed bog lands of Ireland, they have produced a large amount of food. Equally a cleansing crop with the turnip, the mangel stores as well, if not better, is excellent spring food, can be sown earlier, not being subject to insect depredations. Experiments have been made of late in Ireland of substituting the mangel for part of the daily allowance of oats to working horses, and a calculation made that by consuming in this way the mangel produced by half a rood of land, a quantity of oats will be saved which it will require two acres to produce. This crop should be harvested early. I found them more tender than the swede, the yellow globe more than the red; in pulling them, care must be exercised to inflict upon them as little injury as possible."

FARM MISCELLANEA.

Change of Name.

It will be seen by reference to his advertisement that F. E. Eldred, Esq., has changed the name of his *Kemble Jackson* colt, from *Wild Dayrell* to *Kemble Jackson*, there being at this time no horse of that name, and believing that the name will serve more distinctly to mark the characteristics of the stock.

A Caution about Syrup.

Out of forty or fifty bottles of Syrup sent the editor of the *Iowa Farmer*, by various individuals, he has found a number which as early as February 10th had begun to ferment, and he advises those who have large casks to look to it, as much that was made last fall will undoubtedly have a tendency to ferment before next July. On the slightest sign of fermentation, add some soda and then scald or boil over, skimming off any scum that may arise.

Agricultural Education Appreciated.

Dr. Wm. Newton Mercer, of New Orleans, has just made an additional donation of \$2,500 to the Maryland Agricultural College, making the aggregate of his donations to that institution the handsome sum of \$7,500. The building will be ready for the reception of students in September next.

Scotch Plows and Harrows.

The Messrs Hunter and Moir of Northville write us that they are now manufacturing from the best Lake Superior Iron, Scotch plows of most approved style and pattern and which have been awarded premiums at the Agricultural shows of Scotland.

Their style of iron harrows, is what is called the angle harrows, with a loose or universal point, drawn by a coupling yoke or draught bar, and with forty teeth. This is an implement that if rightly used will leave a field as though it had been hand raked.

They are also manufacturing a grubber or cultivator, of a different make from any implement yet offered in this country. This implement works with three wheels, and is operated by a compound lever that lowers or raises the teeth, so that it can be regulated for any depth. This implement is also of wrought iron, and has seven teeth.

We would say that Mr. Moir is a Scotchman who is himself a implement maker having manufactured these articles for Scotland, and has drawn premiums on his work. Mr. Hunter is also a Scotchman, a superior workman, and one who has himself carried on a farm for some years, and is well acquainted with the implements needed by the farming population, to do the best kinds of work.

Horse Mowers and Threshers.

Our readers will notice that the Messrs Wheeler and Melick are in the field as usual with their excellent horse mowers and threshing machines. We recollect very well when they first began their business at Hudson, and the successful manner in which they have since increased that business, and the demand which has resulted for their machines wherever they have been introduced, is sufficient evidence that the horse powers and threshers they manufactured, and have improved, have deserved the patronage which has been accorded to them. For simplicity of structure, strength and completeness of workmanship, and efficiency in operation these horse powers are not any where excelled.

Fat Cattle from Hillsdale.

We note in the *N. Y. Tribune*, that there has been one lot of cattle reported from Michigan that was really creditable to the state. They were twenty-eight head fed by Frederick Fowler of Hillsdale county, and were sold by Geo. Ayrault for Lord and Atwater, drovers, at 10 and 12 cents per pound estimated weight. For ten of them \$106 was offered, the asking price being \$110. The same drovers had a pair of four year old steers raised by J. P. Hill of Hillsdale, which were held at \$240, their weight at home being 3,706 pounds. This price is a little better than 64 cents live weight, and shows that with such cattle as good a price could have been got in this market as in New York, at a saving of the expense and risk. Both William Smith of Marine market, and Mark Planigan of the City Hall market have paid as high prices for the same quality of meat as this shows to have been obtained in New York. These cattle cost full three quarters of a cent per pound to get to New York, as the contract price from Buffalo alone was 42½ cents per 100 pounds.

NEW ADVERTISEMENTS.

HARNES RENICK, Circleville, O. Short-horns for sale.
F. E. ELDER, Detroit, Kemble Jackson.
do do Island Jackson.
do do Glen Black-Hawk.
J. BLOSS & Co., Detroit, Cabbage & onion seed.
do do Seed oats and potatoes.
do do Millet seed wanted.
HUNTER & MOIR, Plymouth, Agricultural Black-smithing.

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, MARCH 26, 1859.

Wool Testimony—Read and Circulate.

Will the friends of the MICHIGAN FARMER read this testimony, sent to us by one of its old friends and subscribers, and then circulate this number among those who do not now take it. The evidence of its usefulness, given by Mr. Prince, is far superior to anything we could say for ourselves, and those who have been acquainted with the course which the FARMER has pursued, will be able to bear witness to the correctness of his remarks. The following is his letter:

Cascade, Kent Co., March 21, 1859.

MR. JOHNSTONE:—Yours is received, and in due time. With your strictures on the New York Rural, respecting the wool market, I was particularly well pleased. I will now give you my experience. Last season about sheep shearing time, I endeavored to ascertain the correct market price for wool, and I read the prices in other papers, which I take and highly esteem, and also in the Michigan Farmer. The FARMER's advice at that time was in substance, "hang on to your wool, don't be in too great a hurry—it will undoubtedly be higher." The other papers thought different: some of them that it would be no higher, and others quoted extracts from eastern papers and letters from eastern buyers, showing the quotations, and that low rates were all that could be expected for the season. There I was, desirous of selling my wool at the highest market price; how could I decide when the "doctors" on which I depended disagreed. I resolved, after some thought, as I was inclined to an equal confidence in the other papers I took as in the FARMER, and as it seemed to be alone in its opinions, that I would take half my wool to market on the strength of what my old friends said, and reserve the other half on the strength of what the MICHIGAN FARMER said. Accordingly I took about half my clip to Grand Rapids and sold it there to the best advantage, getting the highest price then paid, which was twenty-eight cents per pound, and I considered, from the reports of the papers of the day which I was receiving, that I did well, and was satisfied. In about five weeks afterwards, however, I took the remaining moiety of my clip, being of the very same quality as the other in every respect, to the same market, and sold it all at thirty-six cents per pound, being an advance of twenty-eight per cent., and at the rate of thirty-two cents per fleece more than I got for the first lot, as the fleeces averaged about four pounds each.

Now, friend Johnstone, if I were writing for your FARMER, I would kindly say to its readers, that this twenty-eight per cent. which I obtained on my wool by following its advice, is the value of the honest difference between an agricultural paper which has an interest in helping the farmers of the State, and papers that have no further interest than merely to abstract the subscription money from their pockets. Whilst the political and literary papers quote the prices in their immediate neighborhoods, and no doubt correctly, their forecastings do not relate to that which forms a part of the business of the farmer. The MICHIGAN FARMER, on the contrary, has its forecastings directed especially to the interests which we farmers are anxious to learn all we can about—scarcity and plenty—the probable low and high prices—the prospects which the crops we are growing have for a market—all are discussed in their several bearings, with an eye open to what will bear particularly on the farmers of this State.—Now I do not say in this that we are to forego our religious and political advisers, but all should be supported; no matter what a man's political, religious or agricultural creed, he is far behind the lighthouse, if he does not patronize those who labor with the quill to keep him posted and on the right track.

E. PRINCE.

The State Geologist.

We note with much gratification that Professor Winchell of the State University has been appointed State Geologist by the Governor, in pursuance of the law enacted at the late session of the Legislature. The appointment is one which we have no doubt whatever

will result in most beneficial results to the state, and will reflect much honor on the wise discrimination which has dictated it.

As a practical student of Natural History, and the several branches of Science auxiliary to it, there are few men of his age who occupy a higher position than Professor Winchell, and all his tastes, studies and pursuits are such as to render his reports of the highest value. We shall most certainly look for them with much interest, having some knowledge of the untiring enthusiasm and zeal which he will bring to bear on the work, which the Governor has deputed him to carry out.

The Indiana Legislature has passed a law providing for a geological survey of that State, which will undoubtedly have the effect of adding greatly to its wealth, and attracting to it a great amount of capital.

The late Professor Mather of Ohio, when speaking of the benefits to accrue from such a survey, said:

"It will apprise land-owners of the resources in mineral wealth, of which many are ignorant.

"It will indicate the best means of searching for minerals, and of recognizing them when found.

"It will diffuse various kinds of knowledge necessary in mining and metallurgical operations.

"It would attract public attention to the mineral wealth of the State, and cause an influx of population and capital.

"It will benefit the agricultural interest, by making known localities of fertilizers, by making known the qualities and composition of soils, by increasing business and making more home demand for agricultural products.

State Teachers' Institutes.

The first of the series of State Teacher's Institutes for the present year, will be held at Kalamazoo, and will commence on Monday evening the 28th instant. This Institute will be followed by one at Tecumseh, April 4, and that by another at Northville on the 11th of April. The concluding one will be held at Flint on the 18th of April. Each of these Institutes will continue in session for ten working days.

The Crop Prospects.

From all the accounts sent to us by correspondents, and also from what is told us by visitors from various districts of the state and of the west, we learn that the promise of the fall sown crops is excellent.

In regard to the wheat, all concur that they have never seen it look better or more promising. Mr. Horace Welsh of Ypsilanti, Mr. Henry Warner of Dexter, Mr. Delano of Kalamazoo county, personally have informed us within the past few days that in their several districts the crops are coming up with a vigor and luxuriance that has seldom been excelled. Mr. J. J. Newell of Adrian, who has been west as far as Iowa, stated to us that in every direction where he had had opportunity of observing the crop, it was giving evidence of having passed through the winter season in a most healthy state, and was giving promise of a luxuriant growth.

We have also been making some inquiry as to the condition of the sheep, and how they have passed the winter. Nearly all concur that the flocks in their vicinity, have done well, and are in a most healthy condition. Some correspondents indicate that there is little if any increase in the number of sheep in the several flocks; others state that there is a decrease, and a few state that there is a slight increase in the size of the flocks, but it is generally conceded that the growth of wool has been good, and the average weight of fleece per head will be heavy.

We give a few quotations from the press, to show what is said of the crops.

The Ypsilanti Sentinel states, that the wheat crop on the sandy plains around Ypsilanti looks well.

The Jackson Patriot, says: "We have made considerable inspection of wheat fields in this and the adjoining counties during the last week, and they present the least injury from the effects of winter that has been noticeable for many years. We have not yet seen one acre that may be called winter killed.

The Grand Rapids Press states that the wheat looks well in Kent county, but there is a much less breadth of land sown than usual. The Grand Haven News, Ottawa County, state that the fall wheat in that county is very promising for a good yield.

The Niles Inquirer states that "wheat could hardly look finer than it does in Burien county."

The Marquette Journal complains that the first month of spring has commenced and there has as yet been no winter in that region. At no date did the mercury range as much as 10 degrees below zero, and then only for a few hours!

A railroad convention is now in session at Buffalo for the purpose of regulating the business and time tables of the several roads for the coming season.

Literary News.

The Boston Transcript states that "during the coming season a novel is to appear in England, and simultaneously from the press of Messrs. Ticknor & Fields in America, which from its authorship will command immediate attention, and from its power will produce a very marked and wide spread sensation. The title of the book is 'The Reminiscences of Geoffrey Hamlyn.' We speak from authority when we promise to the reading public a remarkable volume. During the past winter it has been the talk of the London Clubs, the manuscript having been read by various parties in the literary circles of England. The writer bears a name of the highest mark in authorship."

A singular work is in preparation abroad. It consists of a book of parodies on all manner of dead and living poets, to be called "Rival Rhymes."

Mr. C. B. Norton, a well known literary business man, is about to proceed to Europe for the purpose of making additions to the libraries of several American Colleges.

The Atlantic Monthly for April has been received; its contents are varied and possess the highest interest for those who really love and can appreciate the highest order of periodical literature. The "Minister's Wooing," continues to become more and more excellent as the story proceeds, and so far excels any of Mrs. Stowe's previous works.

W. A. Townsend & Co. of New York, issue very soon a new work which is to tell every body, everything about common things and their history and mystery.

James Challen & Son, of New York, are getting ready a new question and answer book for Sunday schools.

A. O. Moore & Co., the Agricultural book publishers of New York announce a new work by Henry F. French, of Massachusetts on the principles, processes and effects of draining land. As Mr. French visited Europe on a tour to examine agricultural improvement in the old world, we expect this will be a good work on this important subject.

"Herbert's Hints to Horse keepers" is also promised soon by the same firm. This is the work which the author had just finished before his most unfortunate death.

We note that the Messrs. Moore have also in preparation a new edition of Langstroth's work on the Honey Bee. It is greatly to be hoped that the author has made this more of a manual, and has eliminated much of the useless verbiage which tends to disfigure his first edition. The work is one of the best we have, but there is so much chaff mixed up with the grain, that it injures its utility.

Charles Scribner is getting out a work on Chess, N. P. Willis' new book, entitled the "Convalescent," a work on the art of Extremep Speaking; we suppose this means "How to string words together" without losing the grain of sense that may exist in the subject, although the speaker may not have any. The same firm are getting out Headley's life of General Havelock. This we expect will be brilliant.

The late firm of Sheldon, Blakeman & Co. has been dissolved; one of the partners, Mr. Birdsey Blakeman having associated with himself Mr. Albert Mason, under the style of Blakeman & Mason, will conduct business at 310 Broadway, formerly occupied by Rudd & Carleton; the other partners under the style of Sheldon & Co. continue at the old location.

The dissolution of the late firm of A. S. Barnes & Co. has led to the formation of A. S. Barnes & Burr, who remain at the old store, and to the firm of S. A. Rollo & Co. at 29 Park Row. The latter gentlemen have introduced a novel and peculiar feature in the arrangement of their store, and in its general discipline. They have taken the ship as their trade emblem and the internal economy of their business is, as far as practicable, made to conform to the system which obtains on a well commanded American merchantman. This involves many ingenious and curious contrivances which will well repay a visit.—Amer. Pub. Circular.

Childs & Peterson have just issued the first volume of a work which has for a long time past been in preparation, and the publication of which has been eagerly looked for by all who take an interest in literary matters: "A Critical Dictionary of English Literature, and British and American Authors, Living and Deceased, from the earliest accounts to the middle of the Nineteenth Century: containing thirty thousand biographies and literary notices, with forty indexes of subjects," by S. Austin Allibone.

The Geology of Pennsylvania, being the reports of H. D. Rogers on the geological survey of that State, has been issued by the Messrs. Blackwood & Sons of Edinburgh, at the price of eight guineas or forty dollars for the three volumes.

A work on horses by the late Harry Hieover is announced. It is entitled "Things worth knowing about horses."

The Messrs. Longman & Co. of London announce a new work on Horses by a Captain Vere de Hunt of the British army. This class of literature is increasing very rapidly. Information about breeding, management of stock, and the art of propagation and taking care of cattle and horses in sickness and in health seems to be in request.

In England, we notice that Mrs. Miller, the widow of the lamented Hugh Miller, is about to issue a work entitled the "Sketch book of popular Geology," being a series of lectures delivered before the Philosophical Institution of Edinburgh. The introductory preface is to be a resume of the progress of geological science within the last two years, and will be written by the editors.

A work valuable to Theological and Biblical students is soon to issue from the English press, being a Cyclopaedia of Works on the Holy Scriptures. This work comprehends an ample index to the texts and subjects of every work on the Bible from the earliest times, and in all the various languages known.

Dr. Fischenback of Leipzig, has lately returned from the east, where he has been making researches. He brought with him some important Greek manuscripts illustrative of sacred history that promise to yield some highly interesting results.

GODEY'S LADY'S BOOK for April appears very attractive with its numerous engravings and beau-

tifully colored fashion plates. There are sixty-four engravings in this one number. Of the stories we do not make much account, though they may be amusing to a certain class of readers, but there is a great deal in Godey besides the stories. The music, the remarks and suggestions about fashions, the beautiful embroidery patterns, plans for rural architecture, household recipes, directions for the sick room and nursery, chemistry for the young, social amusements, &c., are all worthy of high praise, not only for the costly manner in which most of them are illustrated, but for their real practical character, and adaptation to home use. Godey well deserves what he now claims to have, "the largest circulation of any Magazine in America."

Foreign News.

An important movement has taken place in the whig ranks of the British parliament, a coalition being formed between Lord Palmerston and Lord John Russell, to defeat the reform bill introduced under the auspices of the ministry. Should a defeat of the ministry be occasioned in the progress of the bill through the House of Commons, there would either be a resignation of the ministry, or a dissolution of parliament. D'Israeli, the leader of the ministerial party, has already threatened his opponents with the latter alternative, so that either the reform bill will pass, or there will be a general breaking up for the purpose of beginning again.

The accounts from the Continent are in some degree conflicting. Napoleon, it seems, has assured the British ministry that all the immense preparations are only such as are needed by the regimen of the army. Nevertheless the preparations go on with unabated vigor. The Parisian press are much bolder and more warlike in their tone, and on all sides it seems to be the popular opinion that hostilities will commence whenever the right time has been reached.

It is now stated that France and Austria have engaged to withdraw their troops from Rome, and rumors are prevalent that great preparations are being made for the reception of a distinguished visitor as yet unknown, but who is suspected to be the Pope. It may be that the Pope will visit Paris, and that such a visit will be esteemed the most appropriate time to have the first campaign, while his return would be rendered impossible, and his residence at Paris made as agreeable as possible, but without restraint of course! But we rather think that Pius Nono is not to be caught in that gilded cage. But it is impossible to say what effect the withdrawal of the Austrian and French troops would have on the inhabitants of the Roman States.

Meanwhile the old hereditary obstinacy of the House of Hapsburg is waked up in the Austrian Emperor, and it seems he is as bent on war, and on resisting the demands of Sardinia and France, as they are determined on insisting upon them.—The whole military forces of the empire are placed on a war footing, and all the fortresses of Northern Italy are being reinforced and strengthened, and immense garrisons are at every post. The people of Vienna are also becoming infused with the war fever.

The whole action of Sardinia is now to prepare herself for the impending struggle. She, too, is strengthening all her garrisons and fortresses and encouraging the formation of battalions of deserters from the Austrian army, who are said to be crossing the frontier in considerable numbers every day. The policy of Sardinia is of course to wait for France, but at the same time to find the occasion for the war when all is ready.

Meanwhile Germany is much agitated, partly by fear that Napoleon will turn his attention to them when the Italian question is settled, and partly by a desire to aid Austria.

Prussia as yet holds aloof, though she has her armies well in hand, and was taking the precautionary measure of rendering them ready for movement at any moment.

Russia is quiet, and awaiting the movements of the belligerents, but it is supposed, urging, with steady moderation, Sardinia in her aggressive policy.

The summer, seemingly, will bring a wonderful series of events, if not some changes in the map of Europe.

The steamer Nova Scotian brings intelligence of the resignation of Prince Napoleon of the Ministry of Algeria. He is succeeded by M. Chasleour Loubat. This resignation is considered an omen in favor of the preservation of peace, and government securities had gone up in consequence, English consols being quoted at 94.

The Neapolitan exiles refused to be carried to America. When a few days out from Gibraltar, they directed the captain of the vessel to land them in Ireland, but he refused, whereupon they confined him and directed the mate to obey their orders, which he did. The exiles were therefore landed at Queenstown, in the Bay of Cork. The Times and London journals welcome the Neapolitans cordially.

Mr. Preston, the new American Minister, is reported to have arrived at Madrid. Nothing is said of his reception.

The Monitor had issued an article which was strongly pacific, and was considered remarkably conciliatory, but doubts are expressed of its sincerity. Besides, it is very doubtful whether the Italian population of Lombardy and the Austrian possessions in Italy can be restrained from making a demonstration, and then Sardinia will have to step in, and we should like to know if France can then remain idly looking on. In the meanwhile the stock operators are making up for late reverses.

General News.

—There has been a grand eruption of one of the volcanoes in the Sandwich Islands.

—The two steamships which sailed from San Francisco on the 5th instant took away one and a half millions of gold. Business is represented as good at that port.

—The plans for the new Young Men's Hall in the city of Detroit are now under consideration. It is estimated that the building will cost about sixty thousand dollars.

—The citizens of Pontiac seem to be in earnest in their endeavors to discover the perpetrators of an outrage on the property of Judge Van Valkenburgh, which consisted in shearing his horses, cutting his harness and buffalo robes, and his buggy top, and threatening to turn him out, all on account of being called in to aid in carrying on

some suits commenced by the prosecuting attorney for the illegal selling of ardent spirits.

—It seems that the statue of Mr. Webster by Powers the sculptor, and intended for the Boston Athenaeum, has sadly disappointed the citizens, and is considered almost a caricature of the great man.

—Asparagus and strawberries have arrived in small quantities at New York from some of the southern ports, and have been purchased at high rates by some of the restaurants.

—Dr. Bailey, the editor of the National Era is about to make a trip to Europe with the design of improving his health.

—The excitement in relation to the Catholic children in the schools of Boston, is dying out. Most of the children have returned, or been sent back to the schools with injunctions of obedience to the authority of the teachers.

—Mr. La Mountain, who has in the course of preparation the balloon with which he intends to cross the Atlantic, is getting his cordage made at the rope works at Troy, N. Y., and will probably manufacture the balloon itself at that place. The work is being pushed forward, and we expect to hear of the trial being made during the summer.

—T. S. McFarland, of Urbana, Ohio, relates in a letter to the Cincinnati Gazette that a colored man named Richard Stanhope is residing in that place aged one hundred and twelve years, and who was a servant of General Washington, as he has the certificate of Washington to that effect. This man was also in the army at the time of General Hull's surrender. He has been a member of the Baptist church for eighty-eight years.

—Great floods have occurred in the mining districts of Pennsylvania.

—The Hibbard House at Jackson is supplied with water from an artesian well that was sunk 110 feet through the rock. The water rises high enough to supply the whole house from the cellar to garret.

—The American ship David Stewart of Baltimore, has been chartered to bring the Neapolitan exiles from Cadiz to New York.

—The Washington papers still give many particulars relative to the Sickles case which are really most uninteresting. Mr. Sickles has been fully indicted for murder by the Grand Jury, and Mrs. Sickles has left Washington in company with her mother, to take up her residence in New York.

—A terrible murder has been committed in the town of Ensey, Newaygo county, by two men who afterward committed suicide, one by shooting himself and the other by poison. The young man who was murdered was named Bronson and the parties who committed the crime also attempted to shoot his father, but missed him.—There is no cause assigned for the deed, except a suspicion of an attempt at robbery.

—It is proposed to hold a centennial anniversary of the surrender of old Fort Niagara, by the French to the English on the 25th of next July. The celebration to be participated in by the military of Canada and the United States.

—Kossuth, the Hungarian patriot is established in Upper Gower street, Bedford Square, London. He is in straitened circumstances, living on the proceeds of his lectures and contributions to newspapers, eked out by the remnant of his wife's \$20,000, most of which was lost in railroad investments in the United States.

—Kossuth still admires our country and its institutions, and thinks he made some mistakes on his visit here, in consequence of his ignorance of our affairs and the advice of interested friends. In European politics he takes a warm interest, censuring with unqualified severity Orsini's plot against Napoleon's life, and Mazzini's local insurrections as identifying the cause of liberty with murder and assassination. He still confidently expects its triumph in Europe and other lands; and whether he shall live to see it, appears to him a matter of small consequence.

—On Sunday the 13th instant, there were a large number of butterflies seen in the streets of New York.

—Great excitement is felt as to the result of the billiard match which is to be played in Detroit on the 12th of April, between Michael Phelan of Detroit, and John Scerlet of New York.

—The death of a noted author and writer on horses is chronicled in the English papers, namely Charles Bindley, Esq., but more generally known as "Harry Hieover." His works are recognized as authority, and well deserve to be for their practical good sense.

—Mike Walsh a prominent New York politician of the rowdy order, and once a member of congress, was found dead a few days ago. He is supposed to have fallen down a flight of stairs while in an apoplectic fit. Mike was what is called a "hard boy."

—The deposed Emperor of Hayti, Souleouque, is said to be about to take up his residence in Paris.

—We note that the Rev. Henry Ward Beecher is to deliver some lectures at the west during the spring and summer.

—The Lawyers in Keokuk, Iowa, publish a statement that the collection of debts by suit in that locality has been practically suspended since the Fall of 1857, and will be until June next, if not longer, in consequence of peculiar rulings of the Courts.

—The recent census of St. Louis shows that out of 185,000 inhabitants, but 57,557 are Americans; less than one-third of the whole population.

—The bill introduced in the Missouri Legislature to appropriate \$2,000 to the Mount Vernon Fund, has passed both Houses and received the signature of the Governor.

—A Railroad disaster occurred on the Great Western Railway near Hamilton C. W. on the night of Friday last, by which six persons were killed, and a large number more or less injured. The accident happened through the washing away of a portion of a high embankment, and seems to have been one of those not arising from any neglect or want of care on the part of the officers and employees of the road.

—Accounts from Leavenworth, inform us that emigrants for Pike's Peak have been arriving in large numbers, and the accounts from the mines continue very flattering, as a matter of course.

—The legal rate of interest now allowed in Ohio is only six per cent. Though there is no penalty for charging or being paid a higher rate by parties who choose to agree to do so, but a higher rate cannot be collected by law.

—Robert Olds has been appointed and confirmed United States District Attorney at Washington.

—The Rev. Dr. Bethune of Brooklyn, sailed for Naples from New York. He has resigned his pastorate of the church of which he had the charge.

—Theodore Parker, whose health caused a visit to Havana, is said to be improving.

—A story has been going the rounds of the papers relating that certain caves were discovered with giant skeletons in them, turns out as every one expected it would, to be a hoax.

—A correspondent in the London Times calculates the age of the great California tree, in the Crystal Palace at Sydenham, at about six thousand four hundred and eighty years! It must have been planted, according to that, when Adam was a very small baby, if not before. The same writer refers to another California tree, which must be at least seven thousand one hundred and twenty-eight years old.

—The object of Mr. Cobden's visit to this country is said to be to look into the affairs of the Illinois Central Railroad, in which he is a large stockholder.

—The Artesian well at Columbus, Ohio, has reached a depth of 1,891 feet, and gives some cheering signs of water. The water is supposed to flow in the sandstone veins, and the limestone now brought up is very gritty with sandstone.

The Household.

"She looketh well to the ways of her household, and eateth not the bread of idleness."—PROVERBS.

EDITED BY MRS. L. B. ADAMS.

A SPRING SONG.

BY MRS. L. B. ADAMS.

The days are length'ning on the earth
And bright'ning in the azure heaven;
How thankfully our hearts look up
To him who hath the Spring time given.
Not one of all the seasons four,
Though rich in bloom and bounteousness,
Brings to our life such tender joy,
So sweet a crown of hope as this.

We take the Summer's harvest gifts
And turn, with heat and toil oppress,
To lay the burdens that we bear
On placid Autumn's matron breast.
Then, shrinking from her fading charms,
We welcome Winter's icy reign,
Well conscious that his parting breath
Will wake the sweet young Spring again.

Young with that pure, immortal life
Born at the threshold of the tomb,
And sweet with all its prophet buds
Full of the Summer's ripened bloom.
O God, though from our hearts thou take
The dearest treasures life can bring,
Blight not the tender joys that wake
Perennial with each blooming spring.

Spring Time.

Spring is coming early; even in our backward, northern latitude the blue birds have been heard at least three weeks ago, and once within that time we have heard the loud, cheerful piping of a robin from among the branches of an old pear tree in a neighbor's garden. A stirring, vigorous, cheery song it was, and quite silenced for a while the softer warbling of the two blue birds tilting in the early sunlight on the topmost twigs of the tall poplar in front of our window. But bird singing is not the only sign of spring time, even in the city. The maples along the streets have put out their crimson blossoms, the lilac bushes show a greenish tinge, and the great glistening brown buds of the horse-chestnut and Balm of Gilead trees are swelled almost to bursting. The grass, along the edges of the sidewalks, has a fresh, spring-like look, after the washing the warm rain has given it, and so have the patches of sprouting iris, and the delicate crocus buds pushing up through their winter covering of tan-bark in the carefully-tended yards and flower gardens. Choice shrubs that have stood all winter shrouded and bound with old bags and wisps of straw, now stripped of their covering and loosed of their fetters, are spreading their branches to the soft winds, the spring rains and the sunshine, which will soon replace their garments of straw with robes of green all starred with blossoms.

In doors too, the prevailing spirit of the season is beginning to make itself manifest. Everybody feels the necessity of doing something to correspond with the spring changes going on without. Men throw off their fur mufflers and rough overcoats, young ladies lay aside their heavy velvets and merinoes for lighter tissues and brighter colors, and careful housewives are growing uneasy at the wonderful discoveries of dust, and smoke stains, and cobwebs made by the clear spring sunlight as it pours into their parlors when the shutters are opened, as they must be now, to let in the sweet, refreshing air.

Yes, it is evident from many well known signs that the day of man's tribulation and woman's supremacy, the time of the semi-annual house-cleaning is drawing near. Now, without going into the particulars of tearing up carpets, pulling down curtains, and applying suds and whitewash, let us gently hint that all this may just as well be done in a quiet, orderly way as any other work. There is no need of turning your whole house upside down and inside out, and making everybody cross and uncomfortable for a week at the time. By having all the material and help necessary, ready at the beginning, and taking each room in succession, a skilful housekeeper can so manage as scarcely to disturb the routine of her household. But with too many, this quiet way of doing things would be no satisfaction at all. They seem to have an idea that the more noise and bustle they make, the more they stir up the dust, spatter the whitewash and splash the suds, the cleaner the house will be; and the more discomfort they can create while they are about it, the better satisfied they feel. They go blustering about, mop and broom in hand, scowling, cross, and sometimes spiteful, and as disagreeable to meet as a rough March wind. Perhaps the quiet that usually comes after a storm will be all the more appreciated by the members of the household that has such a mistress at its head; but for us, give us the housekeeper who can go about her work as gently, as pleasantly, and yet as earnestly as May does her labors of love and beauty in

the gardens, fields and forests. No bleak winds with driving clouds spitting snow and sleet can unfold such leaves and blossoms as are brought forth by the genial influence of soft winds and gentle showers and cheerful sunshine.

One caution more. Do not begin your house cleaning too early. These fair days may be of deceitful promise. Keep your stoves in your rooms and fires in your stoves till all the cold spring rains are past, and till husband and children can stay out of doors with comfort, while housemaids and soap-suds reign supreme within. Dusty carpets and dingy walls are less to be dreaded than colds, coughs and consumption.

Respect your Fingers.

Miss Mulock in her "Thoughts about Women," says: "With all due respect for brains, I think women can not not be too early taught to respect likewise their own ten fingers." We would add too, let them not be ashamed of the work their fingers are capable of doing.

It is becoming quite common for girls to indulge a sort of pride in trying to make people believe that the only use they have for their fingers is to keep them white and soft, adorn them with rings, and now and give them a little gentle exercise over the piano keys. Not that this is all they do, by any means, for many of them are really industrious, good-hearted girls, only they have allowed false ideas of gentility to run away with their good sense, and so have forgotten the respect due to themselves and their ten fingers. Sometimes they take a languid pleasure in showing or speaking of a bit of worsted work or fancy embroidery, as something they have done "just to amuse themselves and pass away the time." They would not for the world have it appear that they took hold of any sort of work in earnest, and we have known them to blush, and, in one or two instances, to tell a "white lie" to conceal the fact of their having done something useful. This is a very silly way of "being genteel," and makes very miserable martyrs of those who practice it, for they are constantly on the rack, tormented by the fear of being found out. Nevertheless many otherwise estimable women afflict themselves in this way, from the false notion that labor is degrading, and that it belongs exclusively to those who must work to live.

Now while it would be very disagreeable to hear people continually boasting of their ability and industry, it is just as much a proof of a want of refinement to see them ashamed of knowing how to be useful. Many young ladies, and some not so very young either, would be proud to have it known that they could copy a piece of music, crochet a tidy, work green and yellow dogs in worsted, or write a story for a Magazine, and would not blush to be caught at any of these employments, or all of them together, if they had fingers enough to carry them all on at once; yet would not for anything be seen making a dress or a loaf of bread, or have it suspected that they knew the difference between a dinner pot and a tea-kettle. This is a mawkish affectation of refinement springing from and fostered by the teachings of modern story writers. Nearly two-thirds of all the romances published, and from one to two pages of nearly all the newspapers, are devoted to descriptions of fairy, floating, fragile creatures who only seen prevented from going off altogether by the downward, drooping tendency of their "wealth of golden hair" and their "heavily fringed lids;" all the rest is grace, gossamer and gammon. And the shame of it all is that, almost without exception, these worse than foolish stories are written by women. But they are women who know nothing of the honest, hearty respect due to their hands, and are working on an imaginary capital of brains, and very shallow ones at that.

Girls, do not listen to them. There is no reality about them, and your attempts to imitate the helpless, idiotic heroines held up for your admiration, are absolutely sinful. Lace your waists, expand your skirts, drink vinegar to make yourselves languid and delicate, poultice your hands and powder your faces as you may, you are still human beings, made of the same flesh and blood, and subject to the same wants and necessities of life as the common work-day people about you. And what is more, everybody knows it; so lay aside your flimsy veils of pretension, which deceive no one but yourselves, dare to be women of sense, ashamed only of idleness, ignorance or vice, and proud of every good and useful thing your hands can do. Respect your ten fingers, and make them the means of winning for you the esteem of the world, your own self respect and the approval of your Creator.

Woman and Art.

That women are steadily proving their ability to occupy honorable and responsible positions in the walks of literature, science and art, is daily becoming more evident, from the success which attends their well directed, persevering efforts. Since it is acknowledged that they have talent, and since the idea has become popular that they are mortals on the same footing with men, and may make a practical use of their powers, they have not been slow to take advantage both of the knowledge and the admission. Their triumphs are common now in almost every path of life and sphere of action.

The London *Lady's Newspaper* speaks in high praise of the exhibition of the Society of Female Artists, recently held in that city. The names of over thirty contributors to the exhibition are given, some of them titled ladies. We quote the following remarks:

"In the essentials of the study of art, this, the third exhibition of the Society of Female Artists, shows a great advance in comparison with those that have preceded it. In the department of flower and fruit painting examples are very numerous—indeed superabundant; and although these are not painted as we have seen such material treated by ladies not many years ago, still, with all the accuracy of drawing and natural brilliancy of hue whereby they are signalized. The specimens of flower painting are still too numerous, although among works of this class we see here also the rarest quality of art. The figure pictures of this year show augmented power in dealing with the difficulties not only of drawing and composition, but also with those of varied expression, always an ultimate accomplishment. As an instance of the most penetrating fervency may be mentioned the 'Vivia Perpetua,' of Miss Gillies, a production which would do honor to any school. It is much to say of any picture that, in composition and chiaro-oscuro, there is nothing to disturb the contemplation of the expression, and that the expression is so absorbing, that the emotions of the beholder are deeply excited by the sentiment of the picture; and yet this, and more, may be said of this work."

After specifying a large number of the paintings and their authors, and speaking in terms of warm commendation and encouragement of both, the article concludes:

"The earnestness and success with which the contributors have worked, must, if sustained, by raising their institution to the rank of one of the recognized Art Societies of the Metropolis, afford feminine artists a resource which their labors fully merit, and which they could not otherwise enjoy."

The Girls of the Past and Present.

In my time, girls were romantic, addicted to falling in love, and to wasting their time over novels and letter-writing. Their worst foible was apt to be love of admiration; their most perilous tendency one towards thin shoes and young officers. In a word, they were a thoughtless, foolish, bewitching, loving, helpless, irresistible set of creatures, in whom one saw at a glance all that was faulty or pernicious; and found out more with every day of closer intimacy, the great underlying wealth of worth and goodness. . . . As for romance, it has had its day. Young women, in whose fresh untutored minds and generous hearts it had known from time immemorial its sure strong hold and sanctuary, have gone over in a body to the enemy, and now range themselves under the brown banner of Matter of Fact, Stern Reality, and Common Sense. They no longer pore over Byron and Lamartine, delight in moonlight and solitude, and the sacred sympathy of one congenial spirit. They study McCulloch and Adam Smith, and light the candles directly it is too dusk to read or write. Moreover, they have grown gregarious in their habits; they incline towards committees, and take pleasure in associations. They know too much about sanitary laws, and pay too great attention to them, even to think of such things as moonlight rambles, or meditations after dark at an open window. The Juliets of the nineteenth century would entirely decline holding any clandestine communication with Romeos from a balcony. In the first place they would consider it weak and nonsensical; and secondly, they wouldn't like to risk catching cold. They have a wholesome consideration for rheumatism and catarrh—disorders which the damsels of my day regarded with lofty and incredulous disdain. As for thin shoes, except for dancing, they appear to have altogether vanished from the feminine toilet; "Balmoral" boots, soles half an inch thick, and "military heels," have usurped their place. Those boots, and the martial red petticoats now so familiar to every eye, are to me eloquent manifestations of the change

that has come over the minds of womanhood. They are sensible, strong, and matter of fact; just as the thin slippers and muslin robes of old time were foolish, fragile, and poetical. I suppose the influence on the statistics of female health under this new regime must be considerable. All very well; but when I was a young man the notion of statistics in connection with a woman would have appeared to me almost profanely impertinent.—*Fraser's Magazine*.

Household Varieties.

Hints to Husbands.—You can hardly imagine how refreshing it is to occasionally call up the recollection of your courting days. How tediously the hours rolled away prior to the appointed time of meeting—how swift they seemed to fly when met—how fond was the first greeting, how tender the last embrace—how fervent were your vows—how vivid your dreams of future happiness when, returning to your home, you felt yourself secure in the confessed love of the object of your warm affections. Is your dream realized?—are you as happy as you expected?—why not? Consider whether as a husband you are as fervent and constant as you were when a lover. Remember that the wife's claims to your unremitting regard—great before marriage—are now exalted to a much higher degree. She has left the world for you—the home of her childhood, the fireside of her parents—their watchful care and sweet intercourse have all been yielded up for you. Look, then, most jealously upon all that may tend to attract you from home, and to weaken that union upon which your temporal happiness mainly depends; and believe, that in the solemn relationship of HUSBAND is to be found one of the best guarantees for man's honor and happiness.

Hints to Wives.—It is astonishing how much the cheerfulness of a wife contributes to the happiness of home. She is the sun—the centre of a domestic system—and her children are like the planets around her, reflecting her rays. How merry the little ones look when the mother is joyous and good-tempered; and how easily and pleasantly her household labors are overcome! How cheerfulness is seen everywhere: it is seen in the neatness of her toilet, order of her table, and even the seasoning of her dishes. We remember hearing a husband say that he could always gauge the temper of his wife by the quality of her cooking: good temper even influenced the savor of her soup, and the lightness and delicacy of her pastry. When ill temper pervades, the pepper is dashed in a cloud; perchance the top of the pepper-box is included, as a kind of diminutive thunderbolt; the salt is all in lumps; and the spices seem to be taking themselves all to one spot in a pudding, as if dreading the frowning face above them. If there be a husband who could abuse the smiles of a really good-tempered wife, we should like to look at him. No! no! such a phenomenon does not exist. Among the elements of domestic happiness, the amiability of the wife and mother is of the utmost importance—it is one of the best securities for a happy home.

A Sunny Smile.—Sydney Smith said of Lady Murray's mother, who had a most benevolent countenance, that her smile was so very radiant that it would force a gooseberry bush into flower! We cannot all of us be beautiful; but the pleasantness of a good humored look is denied to none. We can all of us increase and strengthen the family affections and the delights of home.—*Ladies Magazine*.

In one of her admirable lectures, Lola Montez lays great stress on the cultivation of the voice. The voice may really be called the complexion of the soul, and conversation the personal appearance of that invisible entity. Lola says:—"Indeed, one of the most fascinating women I ever knew had scarcely any other charm to recommend her. She was a young countess in Berlin, with dull eyes, rough skin, dingy complexion, coarse dull hair, and a clumsy form. But she had an exquisite voice, which charmed everybody who heard it. Ugly as she was, she was called the 'siren,' from the fascinating sweetness of her voice, and with an infallible instinct that she had but a single charm, she had cultivated that until she had brought it to the utmost perfection. Words fell like charmed music from her lips, for besides the discipline she had given her voice, she had made herself master of the art of conversation. In this respect every woman's education is sadly neglected. Had I a daughter the first thing I should teach her, in the way of artificial accomplishments, would be to converse charmingly; this is a far greater accomplishment to a lady than music or dancing."

Reason of "Blowing Hot and Blowing Cold."—When air or gases are condensed, heat is set free; on the contrary, when they are expanded, their capacity for latent heat is increased, it is absorbed, and cold is produced. This is a main cause of the danger when streams of air reach us through cracks and apertures although a part of the mischief is caused by conduction. This peril is expressed in the old distich—

"If cold air reach you through a hole,
Go make your will and mind your soul."
Air, spouting in upon us in this manner, not only cools by conduction and evaporation, but, having been condensed in its passage through the chink, it expands again, and thus absorbs heat. It is also familiarly illustrated by the process of cooling and warming by the breath. If we wish to cool anything by breathing on it, the air is compressed by forcing it through a narrow aperture between the lips; as it then rarefies, it takes heat from anything upon which it strikes. If we desire to warm anything with the breath, as cold hands, for example, we open the mouth and impel upon it the warm air from the lungs without disturbance from compression.—*Youmans*.

Ribbons.—Ribbons will, during the ensuing season, form so important a part of the toilet, or at least of its accessories, that they deserve a special mention. At no period within the memory of woman, have RIBBONS been manufactured in such great varieties, or used so extensively. Everything that it is possible to trim at all with this material, is so trimmed; and where fringe seems to be a necessity, the ordinary fringe is superseded by fringed ribbon.—*Ladies Magazine*.

THE APPLES OF NEW ENGLAND.

BY MRS. M. W. DENISON.

The apples of New England!
How hang their loaded boughs,
Over the gray stone fences,
In reach of the dappled cows;
O! every red cheeked Baldwin,
Hath a merry song to sing
Of some old moss roofed cottage,
Where the farmer is a king.

Yes, king of his bursting acres,
Whose grain takes a thousand hues
In the wonder-tinting sunshine;—
Yes, king in his cobbled-shoes;
King of the sturdy ploughshare;
King of the sickle keen;
King over God's full meadows,
Budding in white and green.

The russets of New England!
What ruddy fires they see
Where the crack of the velvety walnut
And the crack of the pine agree;
Where the herbs hang high in the chimney,
And the cat purrs on the hearth,
And the rollicking boys guess riddles,
With many a shout of mirth.

And they hear the fearful stories
That trouble the children's sleep;
Of ghosts seen in the valleys,
And spectres on the deep;
And they burst their sides with laughing,
And fling their rich wines round,
Or dance to a cunning piping,
As the corn pops white at a bound.

O! the sweetings of New England!
Of the old Rhode Island stock—
Brought from the English gardens
To grace the land of rock;
As fair as Briton's daughters,
As hardy as her men,
But fairer lads and lassies
Have plucked their fruit, since then.

O! the Pearmain of New England,
With its blended milk and rose,
There's a smell of Albion's orchards
Wherever the good tree grows;
A stout old pilgrim brought it,
And to cradle its seed he broke
The sacred soil of Hartford,
By the roots of the Charter Oak.

O! the pippins of New England!
What lover's smiles they see,
When their yellow coats in letters
Tell tales at the apple bee;
What rosy cheeks at the quiltings!
What kisses in hushing time!
That soon lead off to the parson,
Or end in a wedding chime.

O! the apples of New England!
They are famous in every land;
And they sleep in silver baskets,
Or blush in a jewelled hand;
They swell in delicious dreaming
On a beautiful, crimson lip,
And taste of the nectared blisses
No lover has dared to sip.

They go to the southern islands,
They go to the western wild,
And they tell of their glorious birth-place,
To every rollicking child;
Of the home where men are noble,
And women as good as fair—
O! the apples of New England,
They are welcome, everywhere!

Letter from an Agonized Man.

My name is Muff. I am a married man. I have a wife, one son and two daughters. I was happy once, but a fiend has usurped my quiet home of late, and my peace has fled.—The name of this demon is "Society," in the fashionable acceptance of the word. Mrs. Muff was once as notable as she was comely, and managed my inostentatious household affairs with a wise economy, and yet in a liberal and genteel manner. Mrs. Muff was also a most excellent mother—lenient, and yet a good disciplinarian. My children always minded when spoken to, were punctual at table, and ate with a fork, thank heaven!—"Look on that picture and now on this," as they say in Macbeth. I quote from memory, Mr. Editor; and will you also have an eye to my punctuation? for I was put to a private school, and don't know much about it. By the bye, Mrs. Muff always d'stained throwing away educational advantages, just because they were public, and used to say, "Jeremiah, dear, if anything ever happens to me, promise me Harry shall always go to a public school," (she used to call me Jeremiah then,) and would add facetiously—for Matilda is witty—"at private school it is all pay and little profit, while parents have the work to do with the children at home." Forgive me that I loiter over the past.

Well, Harry became nineteen and Jane seventeen, when mother, son and daughter were bedevilled at one time, and the demon began in them such a swarm of vanities that I can compare them only to flies in June.—Harry began to talk slang, "wants a fast crab to tote over the road," seized a night key, and never tells where he spends his evenings, comes and goes as he pleases and not at all as I please, dressing, as he says, in a "stunning" manner, and which, I fear, involves much expense, for his mother's demands on me are "stunning" indeed. Jane was a rosebud, neat, intelligent, pretty and sprightly; now she is none of these, and is rather a simpering ninny, mildewed by adulation and "society." But oh! Matilda, that I should have to add you to the black list! The sensible mother has all at once become mentally near-sighted. Her children, like crowned heads, can do no wrong. Every extravagance is excused or explained by a set of phrases, such

as "nerves," "excitement," "position," and "claims of society," and much more fiddle-faddle of the same sort. She that had "early to bed and early to rise" always on her lips, now, night after night, sits up and allows her children to dance till 2 A. M., and cannot read in pallid cheek and glazed eye the fearful bargain she is drawing with the devil in the dance of death. I won't join in it.

If Mrs. Muff is blind to any mental or moral defects of her children, she is equally so in regard to their personal attributes, and she bores me and everybody, I suppose, with a catalogue of their perfections. "Harry is splendid, and considered the best dancer in society." Jane, she does not hesitate to say, though she is her mother, is to her mind, the most beautiful and graceful girl that has come out. This is sheer nonsense even I can see: Jane is very well, but has a turn-up nose and a not small foot. She is, I suppose, something of a favorite, because she is very easily amused and will giggle at anything.

I can't tell, nor would you read, all the nonsense, discord and derangement "society" has brought into my house. Vague hints were put out this morning, like lobster claws, that Jane before long must have what Harry calls a "bang up." What shall I do? I know what it is, for I went to one this winter at the house of an old friend who would not let me off. I went just as I was ready to go to bed, and came home not far from the time I should get up. The house was metamorphosed so the owner would not recognize it under a week at least. The young fry drank up the best wine and usurped the supper room pretty much; they danced till three and the elders nodded and would gladly rebel against "society" if they dared. I saw by my friend's manner that he was bored, and he told me, sub rosa, that it was all his wife's doings, and I thought to myself there are more "Muffs" than one in the world.

Happily the season of Lent has intervened, and I am released for a brief season, for Matilda would not do so unfashionable a thing as to give a "bang up" in Lent. I own with humiliation that fashion influences Matilda, even in matters of faith, for in winter she is a Liturgical Unitarian, and in the summer at Puddleton, a fashionable watering place, an ardent follower of Pusey, and don't object to candles and "man" millinery.

When is this slavery to a word to end. It has made me a widower with a wife, childless with children, and houseless with a house. I am forgetful, not ungrateful. My second daughter Mary, is what Matilda once was—a "brick." (Harry's words again) an angel, I mean. She is still fond of her "governor" (father, I would say) but I tremble for the day when the demon of fashionable life may lay hold of her.

Yours with much respect,

JEREMIAH MUFF.

—Boston Transcript.

The "Try Company."

A GENTLEMAN who was riding in the cars, noticed a bright little fellow, between five and six years of age, sitting with his father and mother, and engaged in the attempt to unloose the knot in a string that bound a small parcel. The knot had become well compacted, and the child's tiny fingers seemed to make no impression thereon. The earnestness of the little fellow was contrasted with the apparent indifference of his parents, who looked on, but made no attempt to assist him. At last the gentleman, whose sympathies with children were warm, could bear the sight no longer; so, partly to help the child, and partly to rebuke the parents, he took out his knife, and handing it to the boy, said:

"Here, my little fellow, try the virtue of a sharp blade. You can't untie the knot!"

Something to his surprise, the knife was not taken; but, instead, the child answered, with smile:

"Please, sir, Father don't allow me to say I can't. I belong to the 'Try Company.'"

"Indeed!" said the gentleman, drawing back his hand. "I never heard of that company before."

"Oh, I've always belonged to it. Haven't I Father?"

And the child turned with an expression of loving confidence in his face, towards his father.

"He's a worthy member of that excellent association, sir," remarked the father, now speaking to the gentleman, and smiling in a pleased way.

"Ah! I understand you!" Light was breaking in his mind. "This is a part of your discipline. You never permit your little boy to say I can't."

"But, instead, 'I'll try, sir.'"

"Excellent," said the gentleman. "Excellent! Here is the way that men are made. It is the everlasting 'I Can't,' that is dwarfing the energies of thousands upon thousands all

over the land. A feeble effort is made to overcome some difficulty, and then the arms fall wearily, and the task is abandoned."

"And who is most to blame for this?" was inquired.

"Parents," was the unhesitating reply.

"Parents who fail to cultivate patience and perseverance in their children. Parents who carry them when they should let them walk, even though their feet may be weary. I see it all as clear as light, and see my own fault at the same time. I cut the knot of difficulties for my children every day, instead of requiring them to loosen it themselves. But, sir, they shall join the 'Try Company' after this. I'll have no more knot cutting in my house."

How is it with you, reader, child or man? Are you a member of the 'Try Company'? If not, and you have any ambition to be something more than a drone in the hive, join it at once; and from this time forth, never let the words, "I can't," find a place on your lips.

Household Recipes.

Hair Brushes.

To wash hair brushes never use soap. Take a piece of soda, dissolve it in warm water, stand the brush in it, taking care that the water covers only the bristles. It will almost instantly become white and clean. Place it in the air, dry with the bristles downward, and it will be as firm as a new brush.

Bridget's Bread Cake.

Three cups of dough, very light.
Three cups of sugar.
One cup of butter.
Three eggs. A nutmeg. Raisins.
One teaspoonful of pearlash, dissolved in a little hot water.

Rub the butter and sugar together, add the eggs and spice, and mix all thoroughly with the dough. Beat it well, and pour into the pans. It will do to bake it immediately, but the cake will be lighter if it stands a short time to rise, before putting it into the oven. It is an excellent cake for common use.

It is very important that the ingredients should be thoroughly mixed with the dough.

Doughnuts.

One pound of butter.
One pound and three quarters of sugar, worked with the butter.
Three pints of milk.
Four Eggs.

One pint of yeast, is home-made, or half a pint of distillery yeast.
Mace and cinnamon to the taste.
Flour enough to make the dough stiff as biscuit.

Rub the butter and sugar together, add the other ingredients, and set the dough in a warm place to rise. When thoroughly light, roll into sheets, cut with a sharp knife into diamond shaped pieces, and boil them in fresh lard. Use a good deal of lard, and have it sufficiently hot, or the cake will absorb the fat.

For our Young Friends.

Miscellaneous Enigma.

I am composed of twenty-two letters.
My 3, 9, 5, 12, 4, 16, 6, 17, is a plant found near the abode of man.
My 13, 6, 15, 8, 7, is a city in Europe.
My 14, 2, 3, 11, 6, 12, 17, is a cape on the Atlantic coast of the United States.

My 3, 8, 10, 13, is a tree, a native of Asia and Africa.

My 6, 9, 13, 18, 7, is a lake in Russia.

My 15, 6, 10, 2, 14, is a flowering shrub.

My 1, 5, 14, 11, 9, is a large quadruped.

My 4, 18, 2, is a pleasant beverage.

My 3, 11, 16, is a vegetable.

My 1, 10, 8, 13, is a shell fish.

My whole was a person who did good service to the American army at Valley Forge. H. W. J. Detroit.

Geographical Enigma.

I am composed of twenty-two letters.

My 2, 18, 20, 8, 15, is a county in Michigan.

My 8, 1, 6, 10, 22, is a town in Michigan.

My 3, 7, 6, 14, 21, 18, 30, is a river in Michigan.

My 19, 21, 12, is a village in Michigan.

My 10, 15, 6, 13, 14, is a town in Michigan.

My 17, 4, 13, 20, 16, is a town in Michigan.

My 13, 15, 7, 10, 9, 18, is a lake in Michigan.

My 10, 21, 21, 13, 11, 15, is a town in Michigan.

My whole is a county in Michigan. S. B. Utica, Mich.

Answer to Charade in last number—HONEY-COMB.

Answer to Enigma—GEN. ANTHONY WAYNE.

Answered by L. G. Wooster, Corunna; S. B. Utica, and L. H. M. Big Beaver.

GROVER & BAKER'S CELEBRATED FAMILY SEWING MACHINES.

495 Broadway, New York.

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A NEW STYLE—PRICE \$50.

This machine sews from two spools, as purchased from the store, requiring no rewinding of thread; it forms, Fells, Gatherers and Stitches in a superior style, finishing each seam by its own operation, without recourse to the hand-needle, as is required by other machines. It will do better and cheaper sewing than a seamstress can, even if she works for one cent an hour. Send for a Circular.

PUBLIC SALE

OF SHORT HORNS.

I WILL offer at Auction, at Circleville, Ohio, on Wednesday next June 15th, about 60 head of Short Horns, about half of which are Herd Book cattle, the remainder high grade, or full blood of imported stock.

A credit of 12 months given for approved Notes at interest. 13-4w HARNESSEN RENICK.

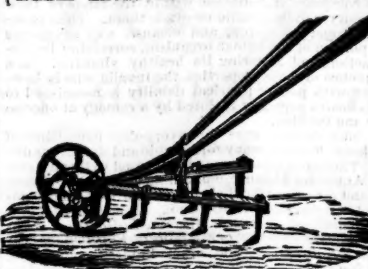
JUST RECEIVED FROM GERMANY. Pure seed of the WINNINGSTADT CABBAGE and the SILVER SKINNED ONION, the finest variety for pickles known, at J. BLOSS & CO'S Seedstore, 22 Monroe Avenue, Detroit, 13-4w

MILLET SEED WANTED. 100 bushels wanted to purchase at the American Seedstore by J. BLOSS & CO., No. 22 Monroe Avenue, Detroit, 13-2w

SEED OATS & POTATOES. Black Oats for Seed and Carter, Early June and Mexican Potatoes. For sale at the American Seed Store, J. BLOSS & CO., 13-4w No. 22 Monroe Avenue, Detroit.

THE IMPLEMENT FOR GARDENS.

THE HAND SCARIFIER.



PRICE \$3.50.

WE offer for sale the Hand Scarifier, the most desirable and useful implement for gardens, of any that has been invented, and the most perfect labor saver. Read the testimony of those who have tried it last season.

ROCHESTER, OAKLAND, CO., MICH., FEB., 1859.

MESSES. BLOSS & ADAMS: You cannot recommend too highly your Hand Scarifier. It is an invaluable machine for cultivating all root crops sown in drills. It works easy, a boy of 12 years old can use it and do more work than five men can with hoes in the same time. It pulverizes the surface of the ground and kills all the weeds. I had one the last season and speak from experience. A person having a quarter of an acre of garden to cultivate should not be without one and no farmer or gardener after using one single hour would be without one for four times its cost.

W. JENNINGS.

ROCHESTER, OAKLAND, CO., MICH., FEB., 1859.

MESSES. BLOSS & ADAMS: In answer to your inquiry, "How we like the Hand Scarifier," we reply that we are highly pleased with it. It is the greatest labor saving machine for its cost that we have ever used, or seen. For all root crops sown in drills it is invaluable. One man, with this machine can do more work in one day than five can with hoes, and do it better. We have used it two seasons and would rather pay twenty dollars for one than do without it.

Yours respectfully, JULIEN ADAMS.

These implements are for sale, by the subscribers at their retail store, J. B. BLOSS & CO., No. 22 Monroe Avenue, Detroit.

THE GREAT PREMIUM MOWER.

THE AULTMAN AND MILLER

MOWING MACHINE.

BUCKEYE MOWER.

AULTMAN & MILLER'S

PATENT.



PATENTED BY C. AULTMAN & L. MILLER.

To which was awarded the First Premium,

A Gold Medal and Diploma, at the

Great National Trial at

Syracuse, N. Y.,

July, 1857.

MANUFACTURED BY

C. AULTMAN & Co.,

Canton, Stark County, Ohio.

After toiling and experimenting for many years, we have finally succeeded in getting up a machine that is perfectly adapted to cut both Grain and Grass. The public are already aware that we have been manufacturing a Mowing Machine that has been used in any market.

But the Farmer wants a machine that will cut both grain and grass, provided he can get a combined machine that will mow as well as a machine made expressly for mowing; and reap as well as a machine made expressly for reaping. We have furnished our *New Machine*.

First—We have a perfect Mower, having several advantages over all other Mowers, and no disadvantages, which will be readily seen by examining some of its points of excellence.

Second—We have a perfect Reaper, which has all the advantages of a single machine, and the only true way of delivering the grain at the side of the machine.

We have a cutter bar and platform for cutting grain, independent of the Mower, so that in changing the Mower into a Reap, we can use the cutter bar at the hinge and couple the Reap platform which renders the machine complete for cutting grain.

In having two cutter bars, one for grass and the other for grain, each is perfectly adapted for doing the work it is designed to do, thus saving the time and labor heretofore existing in combined machines, in having the cutter bar either too long for grass or too short for grain.

This machine has been thoroughly tried, both in grass and grain, having had a number in use the past harvest. The following are some of its points of excellence as a Mower:

1st. It has not one pound of side draft.

2d. It has no undue weight on the tongue, or horses' neck, than a wagon.

3d. Its draft is only 275 pounds—so reported by the Committee at the Ohio State Fair, 1857.

4th. It runs on two wheels which serve as drivers.

5th. It has an adjustable cutter bar and accommodates itself to an uneven surface of the ground.

6th. The cutter bar is in front of the driving wheels and the seat in the rear. Thus enabling the driver to see the operation of the cutters, without interfering with his vision. Also, avoiding all danger of falling into the knives.

7th. The driving wheels have no cogs on them, but drive the gearing by means of pulleys and ratchets.

8th. By means of these pulleys and ratchets, the knives can be raised or lowered, thus saving the time and labor of adjusting the knives.

9th. The driver, while in his seat, can see every bolt, box, and all the gearing when the machine is in motion.

10th. The gearing is all permanently arranged in the centre of the frame, distant from the driving wheels, thus avoiding all tendency of its being clogged up with mud or dirt thrown up by the drivers.

11th. The cutter bar being attached to the machine by means of hinges, can be folded up on top of the machine without removing the connecting rod, knife or track cleaner.

12th. The pulleys on the driving wheels can readily be thrown out of gear, and by folding the cutter bar as above stated, renders the machine as portable as a common cart.

13th. There is a wheel on the shoe next the gearing in front of the cutter bar, thus avoiding all tendency of clogging at the rear shoe, in passing over cut grass.

14th. The off shoe is only 2 1/2 inches wide, and the last knife cuts no more than any other, therefore leaving no ridge or high stubble the end of each swath.

15th. The cutter bar can be raised or lowered by means of an adjustable steel spring shoe at end, and a slot in the rear shoe where the wheel is attached.

16th. There are no nuts or screws at the connecting rod, which are always liable to catch more or less trouble by jerking loose, but use a gib with a spring, pull and a ratchet key, thereby avoiding all possible chance of shaking loose.

Points of excellence as a Reaper:

1st. It has all the advantages that the Mower has in the gearing, connecting rod, and draft for the horses.

2d. The grain is delivered at the side, so that a whole field can be cut without taking any of it up.

3d. The driver is in the rear of the Mower, affording him a free view of the operations of the machine.

4th. The rake stands at the rear of the platform, which is the best position for delivering the grain.

5th. The rake with one motion, throws the grain to the side, thus saving the time and labor of carrying it.

6th. The platform can be raised or lowered to suit all kinds of grain or ground, by means of two screws, at rear side, and slot at side, when off platform.

N. STEELE is the travelling agent, and is now soliciting orders in this State.

All letters of inquiry, or requesting further information may be addressed to

E. ARNOLD, Dexter, General Agent, or BLOSS & CO., Special Agents, Detroit.

TOBACCO SEED. A small quantity of the Connecticut Seed Leaf variety for sale, 40 cts per oz., including postage. G. YOUNG & PINNEY, Plymouth, Mich. 13-4w

50,000 PAPERS

OF FLOWER SEEDS.

A very large assortment of Flower Seeds, annual and perennial, of the choicest varieties, put up in papers, with printed descriptions, for sale at five cents each, or at fifty cents per dozen papers. Catalogues furnished free. Orders, accompanied with the cash, for one dozen, or more papers selected by the purchaser will be forwarded by mail, postage prepaid, by

M. T. GARDNER & CO., Seedsmen, 166 Woodward Avenue, Detroit. February 24, 1859. 9-5w

PEACH TREES. A few thousand good two year old trees for sale. G. YOUNG & PINNEY, Plymouth, Mich. 13-4w

SEEDS! SEEDS!!

OUR Descriptive Priced Catalogue of Vegetable and Agricultural Seeds for 1859 is now ready for mailing to applicants enclosing a one cent stamp.

J. M. THORNBURN & CO., Seed Warehouse, 15 John-st. New York. N. B. A Catalogue of Tree and Shrub Seeds will be published shortly and mailed as above, containing directions for managing evergreen seeds, &c. 6-5w

THE WILLIS' STUMP PULLER

IS the most powerful and most economical machine in use for pulling stumps, and will clear a field in less time than any other invention of the kind.

Twenty-three stumps have been pulled with this Machine in an hour and fifteen minutes. The undersigned will sell machines and rights to use and manufacture in any part of Michigan except the counties of Hillsdale, Branch, Wayne, Washtenaw, Jackson, Calhoun, Kalamazoo, Van Buren, Macomb, Genesee, Shiawassee, Saginaw, Tuscola and St. Clair, which are already sold.

All necessary information as to prices, and mode of using, will be given on application to

or to E. F. JOHNSTONE, Editor Michigan Farmer.

The Machines are manufactured at the Detroit Locomotive Works from the best Lake Superior Iron. [3]

LAWTON BLACKBERRIES.

PRICES REDUCED.

Lawton Blackberry, warranted genuine, good plants \$10 per 100, \$90 per 1000, packed.

Austrian Pine and Norway Spruce, 1 foot, Scotch Fir, 8 to 10 inches, all 1 year transplanted \$50 per 1000, \$140 for 3000.

Holker, Wilson's Albany and Peabody's seedling strawberries 50 cts per doz, \$2 per 100.

Triumph de Gand, and Trollops Victoria 50 cts, per doz \$2 per 100, all other leading sorts \$1 per 100.

Cherries—Duke, Morello, Heart and Biggarreau 2 years from bud, extra fine, \$15 per 100.

Dwarf Cherries, 1 year, fine, principally Dukes and Morellos \$15 per 100.

Rebecca Grape Vines \$1.25 each.

Delaware Grape Vines \$2.00 each.

Houghton Gooseberries, strong plants, \$40 per 1000.

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Best No. 1 imported Pear stocks \$20 per 1000.

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Angers Quince stocks with all the cuttings \$17 per 1000.

Hybrid Perpetual Roses, \$20 per 100.

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All other nursery stock equally low.

Send a stamp and get a catalogue.

Toledo, Ohio. A. FAHNESTOCK & SONS. 9-4w

NEW ROCHELLE BLACKBERRY.

As I have more of the plants of this famous fruit than I wish to plant out myself in the coming Spring, I will sell a few hundred to those who want them, not to sell, but to supply their own tables with fruit, at the rate of one dollar a dozen. A dozen plants will furnish a daily supply for the table for several weeks.

CHAS. BETTS, Burr Oak, Mich. 9-4w

FRUIT AND ORNAMENTAL TREES

For Spring of 1859.

ELLWANGER & BARRY beg to leave to inform Planters, Nurserymen and Dealers in Trees, that they have still on hand to offer for SPRING PLANTING, a large stock of the following named articles of superior quality in all respects:

Fruit Department.

STANDARD PEARS, on Pear Stock, 2 and 3 yrs. from bud.

DWARF and PYRAMID PEARS on Quince, 2 and 3 years from bud.

DWARF and PYRAMID APPLES on Paradise and Doucain, 1, 2 and 3 years from bud.

STANDARD CHERRIES on Mazzard stocks, 2 years from bud.

DWARF and PYRAMID CHERRIES on Mahaleb stocks, 1 and 2 years from bud.

APPLE QUINCES grafted, 2 and 3 years from graft.

ENGLISH WALNUTS, Butternuts, Spanish Chestnuts, Filberts, &c.

[Faint handwritten notes at the bottom of the page]